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ABSTRACT

Results from the third national writing assessment of nine-year-old students conducted in 1979 by the National Assessment of Educational Progress (NAEP) are presented in this volume. Chapter one provides highlights of the results of the test assessment which indicate both decline and improvement on different tasks in the writing performance of nine-year-old students. Chapter two gives an overview of the NAEP assessments, a discussion of the populations assessed, a description of the written exercises, and descriptions of the methods of scoring: holistic, primary trait, analysis of rhetorical effectiveness, and analysis of syntax and mechanics. Chapter three provides an indepth discussion of the results, and chapter four gives an overview of the writing of 9-year-old, 13-year-old, and 17-year-old students. Chapter five offers some observations about writing in the United States and suggests implications of the results of the assessment for instruction. Appendixes include exercises, documentation, scoring guides, and sample papers; guidelines for syntax and mechanics analysis; group results and exercises evaluated for primary trait and cohesion; error frequencies for good and poor papers and selected groups; and the background questionnaire and group responses to background and attitude questions. (MKM)

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WRITING ACHIEVEMENT, 1969-79

C S206 051

Results From the Third National Writing Assessment

Volume III - 9-Year-Olds

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS
Education Commission of the States

Bob Graham, Governor of Florida, Chairperson, Education Commission of the States
Robert C. Andringa, Executive Director, Education Commission of the States
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Results From the Third National Writing Assessment

Volume III—9-Year-Olds

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FOREWORD

When the U.S. Office of Education was chartered in 1867, one charge to its commissioners was to determine the nation's progress in education. The National Assessment of Educational Progress (NAEP) was initiated a century later to address, in a systematic way, that charge.

Since 1969, the National Assessment has gathered information about levels of educational achievement across the country and reported its findings to the nation. It has surveyed the attainments of 9-year-olds, 13-year-olds, 17-year-olds and sometimes adults in art, career and occupational development, citizenship, literature, mathematics, music, reading, science, social studies and writing. All areas have been periodically reassessed in order to detect any important changes. To date, National Assessment has interviewed and tested more than 900,000 young Americans.

Learning-area assessments evolve from a consensus process. Each assessment is the product of several years of work by a great many educators, scholars and lay persons from all over the nation. Initially, these people design objectives for each subject area, proposing general goals they feel Americans should be achieving in the course of their education. After careful reviews, these objectives are given to exercise (item) writers, whose task it is to create measurement instruments appropriate to the objectives.

When the exercises have passed extensive reviews by subject-matter specialists, measurement experts and lay persons, they are administered to probability samples. The people who comprise these samples are chosen in such a way that the results of their assessment can be generalized to an entire national population. That is, on the basis of the performance of about 2,500 9-year-olds on a given exercise, we can make generalizations about the probable performance of all 9-year-olds in the nation.

After assessment data have been collected, scored and analyzed, the National Assessment publishes reports and disseminates the results as widely as possible. Not all exercises are released for publication. Because NAEP will readminister some of the same exercises in the future to determine whether the performance level of Americans has increased, remained stable or decreased, it is essential that they not be released in order to preserve the integrity of the study.

ACKNOWLEDGMENTS

Many organizations and individuals have made substantial contributions to the writing assessments. Not the least of those to be gratefully acknowledged are the administrators, teachers and students who cooperated so generously during the collection of the data.

Special acknowledgment must go to the many writing educators and specialists who provided their expertise in the development, review and selection of the assessment objectives and exercises. Particular thanks are given to Carl Klaus and Richard Lloyd-Jones, both of the University of Iowa, for providing leadership in the development of primary trait exercises and scoring guides; to John Mellon, University of Illinois at Chicago Circle, for providing leadership in the development of the sentence combining exercises and mechanics and syntax scoring guides; to Charles Cooper, University of California at San Diego, for providing leadership in the development of the cohesion scoring guides; and to Paul Diehl, University of Iowa, for providing special assistance in all areas.

Administration of the writing assessment was conducted by the Research Triangle Institute, Raleigh, North Carolina. Scoring and processing were carried out by the Measurement Research Center (now Westinghouse DataScore Systems), Iowa City, Iowa. The scoring staff at Westinghouse DataScore Systems—in particular, Sue Worthen, Donna Benson and Dan Duse--deserve special mention for their excellent work supervising the primary trait, cohesion, mechanics and syntax scoring, as does Wendy Littlefair for her consulting work with the syntax and mechanics scoring. Edward White of the University of California at San Bernardino and his holistic scoring staff also deserve thanks for their work.

Within the National Assessment staff, special thanks must go to Ina Mullis, who has been coordinator of the last two assessments, the designer of the data analysis, the scoring monitor and a tireless reviewer of these reports. Jim Damon must be thanked for his data processing support; Jan Pearson and Ava Powell for their technical support; Marci Reser and Carmen Nietes for their production support. Generously assisted by all of the above, Rexford Brown wrote the report.

Roy H. Forbes
Director

CHAPTER 1

HIGHLIGHTS OF THE RESULTS

Changes in the writing of 9-year-olds were assessed with four writing exercises, and a fifth exercise provides further baseline information. One expressive exercise used to measure change across three assessments was evaluated holistically, and another was evaluated for both cohesion and rhetorical effectiveness (primary trait evaluation). Both were exhaustively analyzed in terms of syntax and mechanics. The remaining tasks—one expressive essay, one persuasive letter and one routine business letter—were judged for rhetorical effectiveness. Exhibit 1-1 displays national percentages of good papers for all of the writing tasks. Details of the assessments, of holistic, primary trait and cohesion scoring, and of syntax and mechanics analysis appear in Chapter 2 and in the appendixes. Further results appear in Chapters 3 and 4, and Chapter 5 presents an interpretive discussion of the results.

Some major findings:

- Holistic evaluation did not reveal significant changes in the average writing performance of 9-year-olds between 1970 and 1979. However, a 6% increase in papers rated 3 and 4 indicates that there may have been some improvement in quality.

- Rhetorical skill (measured by primary trait evaulation) on a narrative task ("Fireflies") declined between 1970 and 1979. In 1970, 17% of the students wrote competent papers, but in 1979, the figure dropped to 10%.

- Rhetorical skill on an expressive essay ("Goldfish") assessed in 1974 and 1979 remained stable. About two-fifths of the 9-year-olds wrote a marginal paper including some detail, while about 13% wrote papers showing skill in elaboration.

- Rhetorical skill on a persusasive writing task ("Puppy Letter") remained the same between 1974 and 1979. Proportions of students who included some appeals remained at somewhat less than half, while about 16% in both assessments wrote letters containing good appeals.

- Rhetorical skill on a routine business letter suggested that 9-year-olds have less difficulty with straightforward tasks. In 1979, about half wrote a successful letter to order a calendar through the mail.

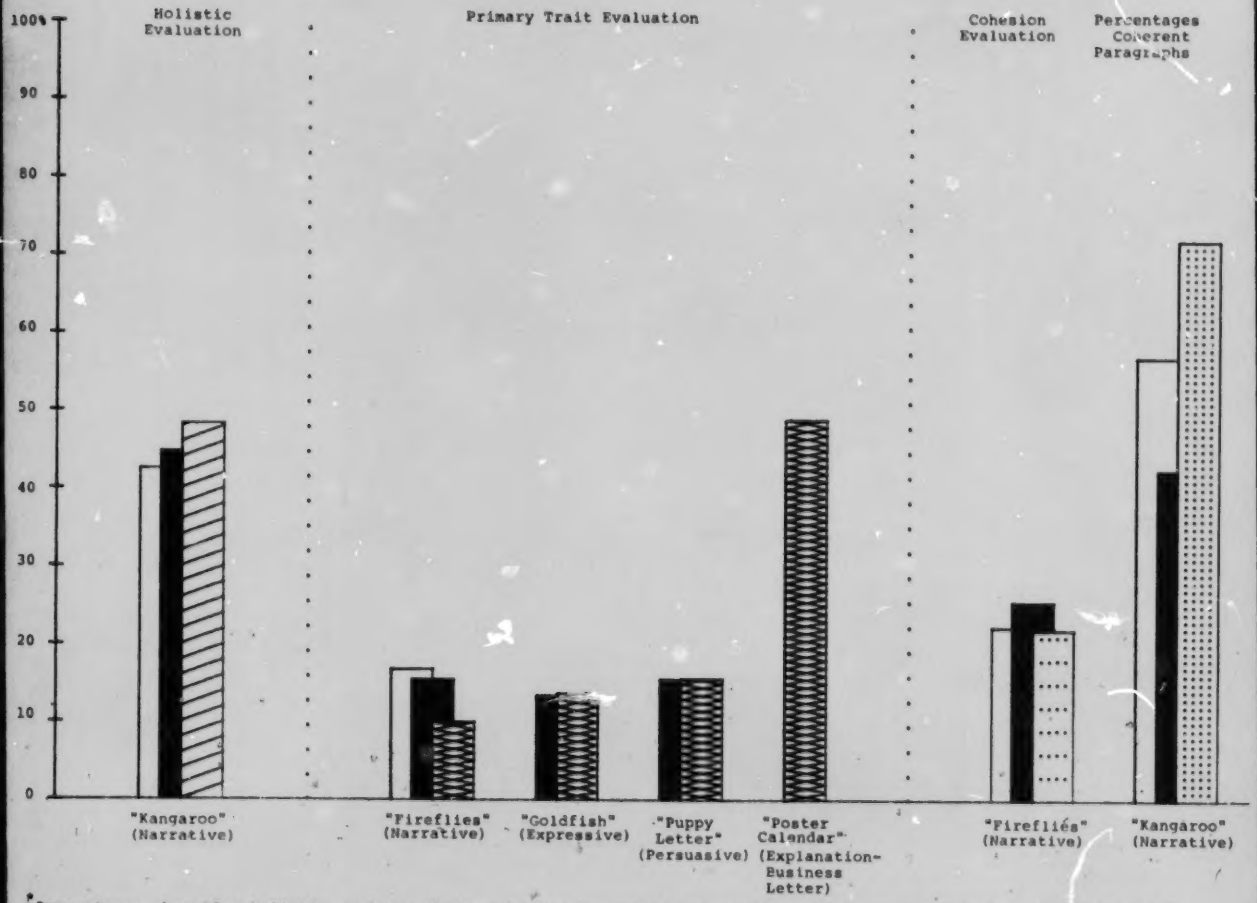
- One measure of coherence showed little change between 1970 and 1979, with about 22% of the students writing cohesive papers in both assessments. A different measure on another task showed the percentage of coherent paragraphs increasing from 57% to 72%.

- Females wrote significantly more successful papers in each assessment, and their advantage appears to be remaining fairly constant across time.

- Although blacks improved their relative standing on the "Fireflies" narrative exercise, almost equaling the performance of the nation by 1979, they performed significantly below the nation on the other exercises.

- On the same "Fireflies" narrative exercise, the disadvantaged-urban group gained in relative standing while the advantaged-urban group lost, with the result that by 1979 neither group performed significantly different from the nation. However, on the rest of the tasks, the disadvantaged-urban group remained at a level below the nation, while the advantaged-urban group remained above the nation.

EXHIBIT 1--1. National Percentages of Good* Papers, Age 9, 1970, 1974, 1979



*Percentages shown for holistic, primary trait and cohesion evaluations are for papers rated 3 and 4 on a 4-point scale.

- There are indications that the embedding and subordination skills of 9-year-olds may have improved from 1970 to 1979.

- Proportions in mechanical errors in the papers seen to have changed little between 1970 and 1979.

- Writers seem to be divided into two camps: a majority who display a general grasp of written conventions and a minority who display massive problems with written language.

- About half to two-thirds of the 9-year-olds appear to have positive attitudes about themselves as writers. However, about a fifth to a quarter of them appear to harbor negative or defeatist attitudes.

CHAPTER 2
BACKGROUND

A. Overview

This report is based upon three national assessments of writing, the first in 1969-70, the second in 1973-74 and the third in 1978-79. Some writing tasks were included in all three assessments, permitting analysis of changes in student writing at three points during the 1969-79 decade. Other writing tasks were included in the last two assessments, permitting analysis of changes during the last half of the seventies.

The results reported in this volume are not based upon the writing of the same 9-year-olds over the nine-year period. Rather, they are based upon three different assessments. Nine-year-olds attending school were first assessed in the winter of 1970. Four years later, another national sample of 9-year-olds was assessed, and five years after that yet another sample was assessed. Since each sample represented the national population of 9-year-olds, the assessments can reveal whether the writing skills of that age group are changing and in what respects. The assessment was not administered to intact classrooms; rather, it was given to a randomly selected group of 9-year-olds who may or may not be receiving the same instruction in writing.

B. Populations Assessed

The target population for each of the three assessments consisted of 9-year-olds attending public or private schools. Details of the sampling design and procedures are explained in NAEP Report 10-W-40, *Procedural Handbook: 1978-79 Writing Assessment* (1980), and numerous other Assessment reports and monographs. Here it should be sufficient to say that each assessment employed a stratified, multistage probability sample design. About 2,400-2,600 responses were collected for any given writing task. Some of the figures given in this report are based on an analysis of all 2,400-2,600 responses to a particular exercise, and some are based upon national subsamples of 384-596 papers—a number sufficiently large to permit generalizations about an entire age group, but not large enough to permit statements about special subpopulations such as rural youngsters. To obtain the representative subsamples of descriptive and narrative papers, scientific probability subsamples were drawn from the total National Assessment samples. Small percentages (1%-10%) of these subsamples were nonrateable papers that were excluded from further analysis. The sample sizes used for analyses in this volume appear in Table 2-1, below, and in parentheses (e.g., n = 384) on each table in the text.

TABLE 2-1. Sample Sizes for Results Presented in This Volume

Essay	Analysis	No. in Sample 1970	1974	1979
"Kangaroo" (narration)	Holistic scoring	384	409	494
	Paragraph coherence	384	409	494
	Syntax and mechanics	384	409	494
"Fireflies" (narration)	Primary trait scoring	2,466	2,573	2,553
	Cohesion	2,466	2,573	2,553
	Syntax and mechanics	556	584	596
"Goldfish" (expression)	Primary trait scoring		2,611	2,475
"Puppy Letter" (persuasion)	Primary trait scoring		2,643	2,494
"Poster Calendar" (explanation-business letter)	Primary trait scoring			2,492
Attitude questions				2,531

Whenever analysis is based upon full samples of 2,400-2,600, we can report results for a number of population groups defined by sex, race, region of the country, parental education, type of community and grade in school. These are defined in Table 2-2. The national subsamples of "Fireflies" permit reporting for only sex and race; the subsample of "Kangaroo," only sex.

TABLE 2-2. Definitions of Subgroups

Sex	Results are presented for males and females.
Race	Results are presented for black students and white students. Data for Hispanic students are not reported because sample sizes for individual items are too small.
Region	Results are presented for the Northeastern, Southeastern, Central and Western regions shown on the following map.

Parental education	Results are presented for three levels of parental education: (1) those whose parents did not graduate from high school, (2) those who have at least one parent who graduated from high school and (3) those who have at least one parent who has had some post high school education.
Type of community	Three extreme community types of special interest are defined by an occupational profile of the area served by a school, as well as by the size of the community in which the school is located.
	Advantaged urban (high metro). Students in this group attend schools in or around cities having a population greater than 200,000 and where a high proportion of the residents are in professional or managerial employment.
	Disadvantaged urban (low metro). Students in this group attend schools in or around cities having a population greater than 200,000 and where a relatively high proportion of the residents are on welfare or not regularly employed.
	Rural. Students in this group attend schools in areas with a population under 10,000 and where many of the residents are farmers or farm workers.
	This is the only reporting category that excludes a large number of respondents. About two-thirds do not fall into the classifications listed above. Results for the remaining two-thirds are not reported, since their performance is similar to that of the nation.
Grade in school	Results are presented for 9-year-olds in grades 3 (25%) and 4 (72%).

In reporting group data, the following abbreviations have been used on tables and graphs:

N	= Nation
M	= Males
F	= Females
B	= Blacks
W	= Whites
SE	= Southeast
NE	= Northeast

C = Central
W = West
NGH = Parents did not graduate from high school
GHS = At least one parent graduated from high school
PHS = At least one parent with post high school education
AU = Advantaged urban (high metro)
DU = Disadvantaged urban (low metro)
R = Rural
3 = 3rd grade
4 = 4th grade

C. The Writing Exercises, Scoring Approaches and Descriptive Analyses

Details of NAEP exercise development procedures appear in NAEP Report 10-W-40, *Procedural Handbook: 1978-79 Writing Assessment* (1980). Complete documentation of all exercises released after the third assessment of writing, including scoring guides and sample responses, is contained in *The Third Assessment of Writing: 1978-79 Writing Released Exercise Set* (1980).

The writing exercises were created by experienced writing educators. Then they were field tested, refined and reviewed carefully before being used. Each assessment contained exercises assessing several kinds of discourse on the grounds that students may be proficient in some kinds of writing but not in others. Thus, we have gathered information about expressive writing, descriptive or explanatory writing and persuasive writing. Although some of the same skills are involved in each kind of writing, there are challenges and strategies unique to each, as the results amply illustrate. Although an assessment that includes many kinds of writing may be somewhat confusing, it is preferable to an assessment that relies upon a single kind of writing.

Several types of scoring and analysis went into the creation of the data in this report. Each is briefly described below and illustrated in the text and appendixes. Readers desiring more information about these procedures should consult the handbook and exercise set cited above, as well as Mullis (1980), Mullis and Mellon (1980), and Brown (1979), which also cite additional references. For each procedure, raters scored a random mixture of papers collected from the different assessments. Each kind of scoring was done by a different group of scorers.

Holistic Scoring

When readers holistically score papers, they do not focus upon particular aspects of a paper such as mechanics or ideas or organization. Rather, they concentrate upon forming an *overall* impression of each paper relative to the other papers they have read. Their primary task is to rank order the papers from best to worst, not to identify errors or to specify writing problems.

Results for the holistic scoring reported in this volume involved several steps. First, the table leaders—all of whom were experienced holistic readers—surveyed the pool of papers from all three assessments and selected examples of papers representing four levels of quality. Then, they developed guidelines describing each level of quality and how to distinguish between top-half and bottom-half papers. The scoring session began with some discussion of the characteristics of the anchor papers and guidelines, and then included several practice scorings of other papers to refine the scoring scale description and iron out discrepancies among readers. When all readers were comfortable with the guidelines (see Appendix A), they scored papers for an hour, after which they discussed more anchor papers. Throughout the subsequent scoring, there were periodic discussions of papers to insure that readers continued to hold to the same standards.

Reliability of scoring was checked by having a random 10% of the papers read by pairs of readers who were matched to detect potential discrepancies. The readers agreed on 68% of the papers.

Papers from all three assessments were holistically scored at the same scoring session to make sure that all were evaulated by the same standards.

The Primary Trait Scoring System (PTS)

The primary trait approach to essay evaluation

involves isolating an important writing skill, developing a task to measure it and articulating four levels of proficiency. When a reader is rating papers for PTS, he or she is rating each paper against criteria spelled out in the scoring guide instead of rating each paper in terms of the entire pool of papers. Thus, whereas a holistic scoring tends to distribute a pool of papers over a "bell shaped curve," a PTS scoring will only distribute papers according to their relationship to the scoring criteria. If none of the papers meet the criteria for the highest rating, then so be it; the object is to *describe* the papers, not rank order them.

Holistic scoring enables one to determine if a group of papers written at one time is better than a group written at another time, but it does not provide much specific information about how the two groups differ. Primary trait scoring provides specific information about particular rhetorical aspects of papers, but does not provide information about overall quality. Thus, it is useful to do both kinds of evaulation whenever possible.

Training for PTS scoring involves thorough discussion of the writing assignment, scoring guide and sample papers. If the assignment has been constructed to elicit evidence of proficiency in a particular writing skill, it should explicitly establish the writing situation, specifying the purpose of the communication, the audience and what must be accomplished. The instructions should unambiguously tell the writer what is required, and the scoring guide should unambiguously define four levels of proficiency in the primary skill being assessed. Generally, level "1" indicates no evidence of the skill; level "2," marginal evidence; level "3," solid performance; and level "4," very good performance. Scorers discuss each level and study papers exemplifying each until everyone feels comfortable with the system. Then scoring commences, with periodic discussion of troublesome papers. All papers were rated independently by two scorers, with disagreements being reconciled by a third scorer. Agreement between the first two scorers ranged from 91% to 97% for the set of papers included in this report.

Some PTS exercises require readers to look for secondary aspects of the papers as well. For instance, the primary focus of the "Poster Calendar" exercise is upon ability to formulate a request clearly enough to order something through the mail. However, scorers also categorized such secondary matters as whether or not the letters contained appropriate greetings.

Scoring guides for all PTS exercises appear in Appendix A.

Cohesion

The term cohesion refers in general to the many ways words and ideas are linked together in writing to create a sense of wholeness and coherence. The cohesion scoring (see guide, Appendix A) required readers to sort papers into groups representing four degrees of cohesiveness. Papers in the lowest group (level 1) display no or few connections between sentences and are loosely structured. Papers in the next group (level 2) display attempts to tie ideas together here or there but do not show any unifying structure. Cohesive papers (level 3) display gathering and ordering of details and ideas, and fully coherent papers (level 4) display a number of strategies and devices that bind the narrative into a unified whole.

Readers discussed the scoring criteria, sample papers, and cohesive ties and strategies before undertaking the scoring. Scoring proceded very much like the scoring for PTS, with periodic checks for consistency and reliability. Also, as with the PTS evaluations, each paper was rated by at least two readers. The percent of agreement was 93% to 94% for each of the three sets of papers.

Syntax and Mechanics

In addition to being rated for quality, the "Fireflies" and "Kangaroo" papers were also analyzed in terms of their syntactic and "mechanical" features. Syntax refers to the ways in which words are put together to form phrases, clauses and sentences. Mechanics refers to the ways in which writers handle basic conventions of writing such as punctuation, spelling or word choice. A syntactic analysis involves breaking up each paper into its "T-units" (a T-unit is a main clause with all its attendant modifying words, phrases and dependent clauses) and examining the

ways in which writers embed information in T-units and join T-units together. A mechanics analysis involves classifying the kinds of errors writers make in sentence use, punctuation, spelling, and so forth.

Both kinds of analysis were done by experienced English teachers thoroughly trained in grammar, usage and linguistics. After the papers had been coded by two to four scorers for sentence types, T-units, embedding, modification, conjoining, mechanics errors and the like, the coded essays were keypunched and the results tabulated to produce the results presented in this report.

Outlines listing the syntactic features analyzed in this report appear in Appendix B. More complete information is also available in Mullis and Mellon (1980).

D. The Analysis and Data Presentation

National Assessment reports the performance of groups of students, not individuals. For primary trait and cohesion ratings, the basic measure of achievement reported is the percentage of papers at each score level or a combination of the best score levels. Increases or decreases in the percentage of good responses between assessments are used to indicate trends in achievement for an age level or a subpopulation of interest.

Tables presenting primary trait results offer percentages for score points 1, 2, 3 and 4, as well as for 2, 3 and 4 combined, 3 and 4 combined, and 0 (nonrateable). The 0 category includes people who did not respond to the exercise, wrote on an altogether different topic or wrote so illegibly their papers could not be scored. Holistic scoring information is presented in terms of percentages of papers at each score point and average (mean) performance each assessment year.

For the descriptive information about syntax and mechanics, data are presented to illustrate the range of performance as well as the average performance. Syntax and mechanics tables present means, medians, quartiles and the top deciles. The mean, of course, is an average across all the papers. Quartiles present a more accurate picture of the entire distribution by providing the value of the papers at the 25th percentile (Q1), at the center point (median) and at the 75th percentile (Q3). The top decile (90th percentile) is the value above which 10% of the papers fell. Quartiles and deciles are unrelated to quality judgments; they simply give the values at various points of the distribution of whatever is being counted—adverbial modifications, number of misspellings, or whatever. These tables, then, should help the reader to see the range of the papers—something that averages tend to obscure.

Because the numbers and percentages presented in this report are based upon samples, they are necessarily estimates, not definitive figures. They are, of course, our best estimates; but they are subject to the qualification that a certain amount of measurement and nonmeasurement error creeps into even the best estimates. Thus, for example, the figure 20% is really 20% plus or minus a certain (usually small) margin of error.

National Assessment computes standard errors that estimate the sampling error and other random error associated with the assessment of a specific item. NAEP has adhered to a standard convention whereby differences between statistics are designated as statistically significant at the .05 level of significance. That is, differences are highlighted only if they are at least twice as large as their standard errors. Differences this large would occur by chance in fewer than 5% of all possible replications of the sampling, data collection and scoring procedures for any particular age group or reporting group. If a national figure was 20% and if the standard error of the female percentage was .5 points, 22% would be noted as "significantly" (in the statistical sense) different from 20%, because it is more than twice the standard error away from 20%. But if the percentage for females was 20.5%, it would not be at least twice the standard error away from 20, so it would not be termed a statistically significant difference.

Group differences and change differences are asterisked in this report if they are statistically significant in the sense just described. If, in the appendix tables, a group difference from the national percentage is asterisked, it represents a statistically significant difference at the .05 level. If it is not asterisked, we are less confident that the

two numbers differ. The same applies to any change percentage: an asterisk indicates statistically significant change, and no asterisk indicates that there may not be a difference between the figures. It is important, however, to distinguish *statistical* significance from *educational* significance. A difference of 3 or 4 points between group and national performance might be statistically significant but too small to merit serious educational concern. One can also imagine a situation in which many changes are negative but no one of them is statistically significant; it could be that the overall *pattern* of negative changes has educational significance. Readers must decide for themselves how important particular changes or differences are in the real world, for statistical conventions can aid, but not replace, good judgment.

CHAPTER 3
THE WRITING OF 9-YEAR-OLDS

A. How Good Are the Papers?

Most 9-year-olds are in the fourth grade. They have had some instruction in writing, but not a great deal, and they have many years of development ahead of them before they reach maturity as writers. Nevertheless, they can write, often enthusiastically, about any number of topics appropriate for their age.

The assessment of 9-year-olds included three expressive tasks, one persuasive task and a short business letter. One of the expressive essays requiring a narrative was scored holistically, and the rest of the tasks were scored for rhetorical effectiveness using primary trait guides.

1. Holistic Judgment of an Expressive Narrative Exercise, 1970, 1974, 1979

The children were shown a picture of a kangaroo jumping over a fence and were asked to write a story about what might be happening in the picture (see Appendix A for the actual writing task). Stories written in 1970, 1974 and 1979 were randomly mixed together and scored holistically along lines described in Chapter 2. Holistic scoring involves training a group of scorers to read large numbers of essays and rank order them from worst to best in terms of overall quality. The scorers had general guidelines (see Appendix A) and papers exemplifying four levels of quality. They practiced on sample papers until they were scoring consistently. Then, they read each paper, formed a general impression of it's overall quality relative to the other papers they read and gave it a rating of 1, 2, 3 or 4.

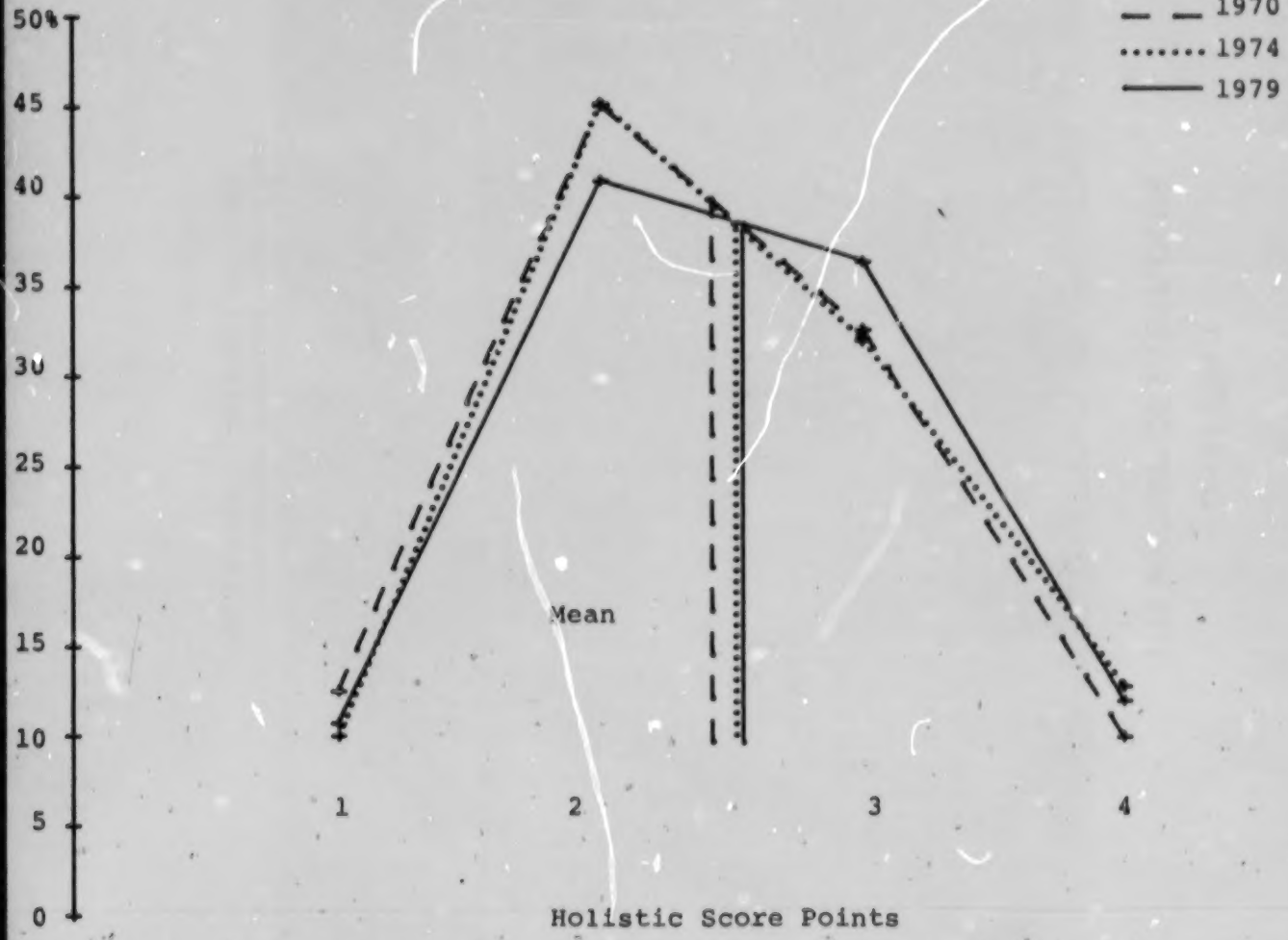
The National Assessment did not conduct three separate holistic scorings in order to gather the change data described in this chapter. Rather, papers written in all three years were randomly ordered into a single pool and scored in a single session. The scorers did not know in which year any particular paper was written, so they necessarily applied the same criteria to all papers. After the scoring, the ratings were examined to determine whether those papers written in different years were perceived, as a group, to be worse or better than the others. Table 3-1 displays the percentages of 1970, 1974 and 1979 papers at each score point. Exhibit 3-1 displays changes in the mean holistic score over the years.

TABLE 3-1. Percentages of Narrative Papers at Each Holistic Score Point, Age 9, 1970, 1974, 1979†

Year	Holistic Score					
	1	2	3	4	3 & 4	Mean
1970 (n = 384)	12.5%	45.1%	32.6%	9.9%	42.5%	2.42
1974 (n = 409)	10.0	45.2	32.0	12.7	44.7	2.51
1979 (n = 494)	10.7	40.9	36.4	11.9	48.3	2.54
Change						
1970-74	-2.5	0.1	-0.6	2.8	2.2	0.08
1974-79	0.7	-4.3	4.4	-0.8	3.6	0.04
1970-79	-1.8	-4.2	3.8	2.0	5.8	0.12

†Percentages may not total due to rounding error.

EXHIBIT 3–1. Distributions of Narrative Papers Across Four Holistic Score Points, Age 9, 1970, 1974, 1979



The data do not show dramatic changes from year to year, but they provide some evidence that the 1979 papers may be somewhat better than those written in earlier assessments. A slow, but steady, improvement appears to have taken place, as papers have moved out of score points 1 and 2 into score points 3 and 4. The percentage of papers in score points 3 and 4 increased from 42% in 1970, to 45% in 1974, to 48% in 1979. In addition, the mean holistic score of the 1979 papers was .12 higher than the mean of the 1970 papers. This change is not statistically significant, but it is a steady, positive change. The evidence suggests that the quality of 9-year-olds' narratives has certainly not decreased and may well have improved slightly between 1970 and 1979.

2. Judgments of Rhetorical Skill

Rhetorical skills come into play whenever one is concerned with the *effectiveness* of something written. Did the writer consider his or her audience's needs? Is the tone of the writing likely to help or prevent the writer from achieving the purpose behind the writing task? The National Assessment objectives for writing *(Writing Objectives, Second Assessment,* 1972*)* suggest that even 9-year-olds must learn elementary rhetorical skills so they can begin to write for different audiences under different circumstances. Accordingly, responses to four writing tasks were judged for rhetorical effectiveness.

The rating criteria used specify four levels of quality from inadequate to very good. Inadequate papers do little or nothing to address the specified task, whereas adequate papers reflect control of the skills the exercise demands. More detail on this approach, called the primary trait system (PTS), appears in Chapter 2 and in Mullis (1980). Primary trait scoring differs from holistic in that it limits judgments to clearly specified rhetorical considerations and ignores other features of a paper, such as mechanics.

Nine-year-olds were asked to write a narrative, a fantasy, a letter persuading a landlord to let them keep a puppy and a letter ordering a poster calendar through the mail. Of course, it would take far more than four writing samples to obtain a comprehensive view of how well 9-year-olds can write under different circumstances and for different audiences. Nevertheless, the following results can contribute to our knowledge about some aspects of their strengths and weaknesses.

a. Expressive Writing

Expressive writing is writing done primarily for fun and self-expression, rather than some other purpose, such as explanation or persuasion. This by no means diminishes its importance, for the skills involved in expressive discourse are central to all kinds of communication.

In fact, particularly for younger students, many teachers capitalize on the enthusiasm generated by expressive writing tasks and develop students' writing skills by providing frequent expressive opportunities.

One expressive writing task given in all three assessments was to write a story about a picture of a girl collecting lightning bugs or fireflies. Nine-year-olds were asked to look at the picture and think about what the girl was doing and what she might do next. The specific task was to "write a story that tells what the picture is about"—in other words, to invent a narrative that explained the situation in the picture. The papers were evaluated according to the scoring guide detailed in Appendix A. Briefly the four levels of quality were defined by the following criteria:

1 = *Some explanation, but no narrative invention.* These responses tend to provide some minimal information or explanation about the picture by simply and briefly answering the questions.

2 = *Moderate to ample explanation, but little or no narrative invention.* These responses provide moderate to ample details explaining or describing the picture, but those details are not set in a story framework.

3 = *Imaginative explanation, by means of narrative invention.* These papers invent details about what is happening and cast them into a narrative framework. They use several storytelling devices such as naming characters, setting scene, temporal or casual linking, dialogue, and so on. However, the stories are not sustained.

4 = *Imaginative explanation, by means of developed and controlled narrative invention.* These responses explain the picture through a fully controlled and detailed story. They set the scene immediately, invent moderate to ample details, cast the details into a narrative without lapses and provide a conclusion to their story.

The national results, found in Table 3-2, show that this was not an easy task for 9-year-olds. The tendency was to "tell" or explain about the picture, not to invent a story. In 1970 and 1974, only about 16% of the 9-year-olds wrote a narrative judged to be level 3 or 4; in 1979, the proportion dropped to 10%. If category 2 is included, the proportion increased from less than two-thirds in 1970 to a high of almost three-fourths in 1974 and then dropped down again to two-thirds in 1979. What looked like a trend toward improvement between the first two assessments lost strength between the second two, particularly at the higher score points.

TABLE 3-2. Percentages of 9-Year-Olds at Each Primary Trait Score Level, "Fireflies" Exercise, 1970, 1974, 1979†

Year	Score Point						
	Non-rateable	Some Explanation, No Story	Ample Explanation, Little/No Story	Adequate Story	Developed Story	Marginal or Better	Competent or Better
	0	1	2	3	4	2, 3 & 4	3 & 4
1970 (n = 2,466)	5.4%	31.7%	46.1%	14.8%	1.9%	62.8%	16.8%
1974 (n = 2,573)	4.3	21.8	58.4	14.0	1.4	73.9	15.5
1979 (n = 2,553)	3.3	29.3	57.3	9.4	0.6	67.3	10.0
Change							
1970-74	-1.2*	-9.9*	12.4*	-0.8	-0.5	11.1*	-1.3
1974-79	-1.0	7.5*	-1.1	-4.7*	-0.8*	-6.6*	-5.5*
1970-79	-2.0*	-2.4	11.2*	-5.4*	-1.3*	4.5	-6.8*

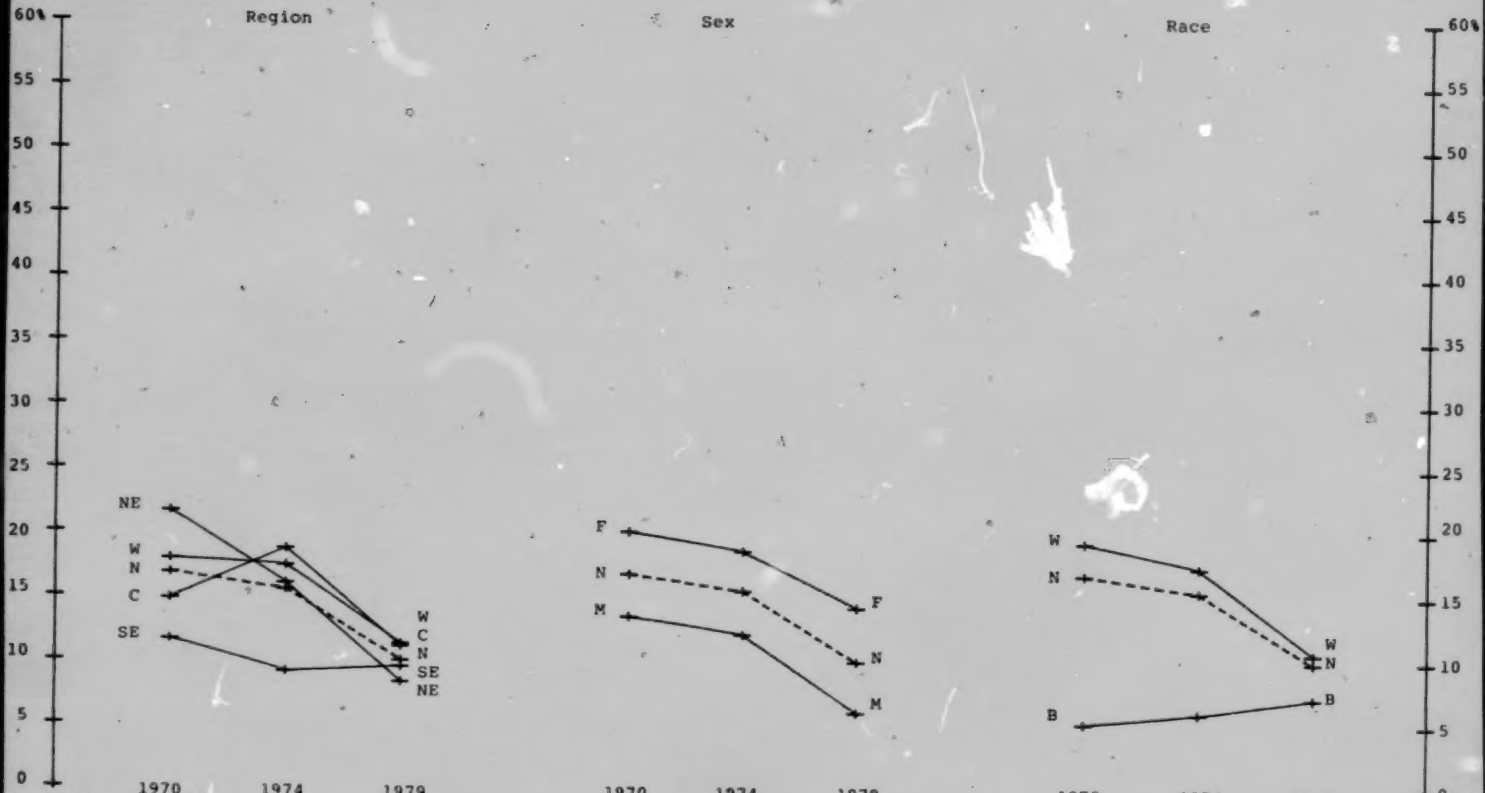
*Statistically significant at the .05 level.
†Percentages may not total due to rounding error.

Exhibit 3-2 displays group results for students receiving scores of 3 and 4, and Exhibit 3-3 displays group results for students receiving scores of 2, 3 and 4. Table C-1 in Appendix C presents the differences between group performance and that of the nation. Girls still appear to write more good essays than boys, with the difference in their performance remaining about 6-8% in each assessment for papers rated 3 and 4 and increasing from 13% to 19% for papers rated 2, 3 and 4.

Black youngsters, as a group, made steady progress relative to the nation by writing about the same proportion of papers rated 3 and 4 while the nation declined. Thus, the blacks' difference was 12 points below the national level in 1970, but shrank to a nonsignificant 3 points below in 1979. Likewise for their percentages of papers rated 2, 3 or 4: in 1970, the group was 26 points below the nation, but by 1979 it was only 6 points below.

A similar phenomenon occurred with the community groups. While the disadvantaged-urban group stayed at about the same percentage of 3 and 4 papers in each assessment (perhaps because it could go no lower), the advantaged-urban group declined from assessment to assessment. Their percentage of 3 and 4 papers was 26% in 1970, 21% in 1974 and just under 15% in 1979. Thus, the difference between each of these two groups and the nation appeared to shrink considerably, with the result that in 1979 neither group was performing at a level significantly different from that of the nation. When 2, 3 and 4 papers

EXHIBIT 3–2. Group Changes in Percentages of "Fireflies" Papers Rated 3 and 4, Primary Trait, Age 9, 1970 to 1974 and 1974 to 1979

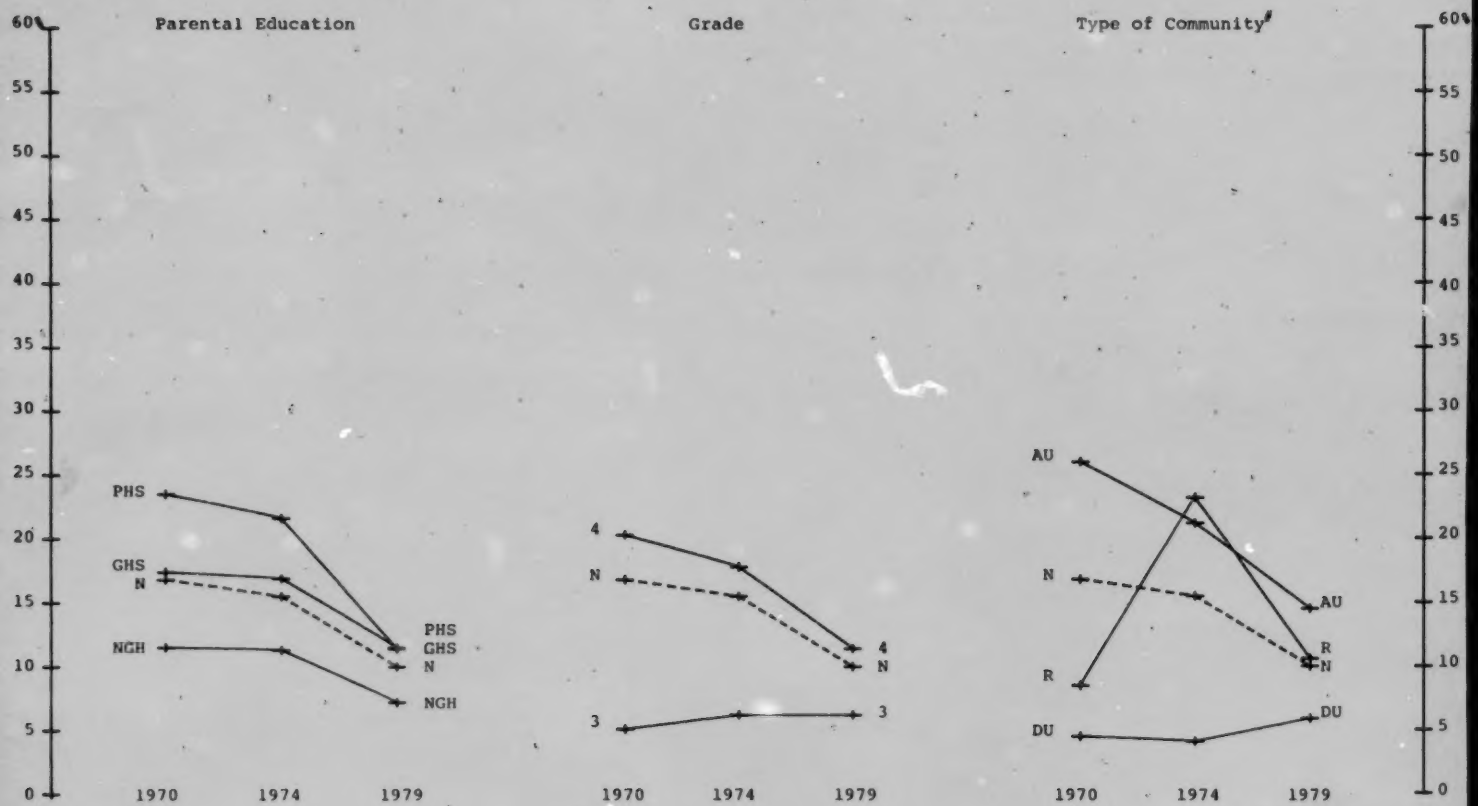


	1970	1974	1979
NE	21.6%	16.0%	8.3%
W	17.9	17.4	11.3
C	14.8	18.7	11.1
SE	11.6	9.1	9.5
N	16.8	15.5	10.0

	1970	1974	1979
F	20.1%	18.6%	14.2%
M	13.5	12.1	6.0
N	16.8	15.5	10.0

	1970	1974	1979
W	19.3%	17.4%	10.7%
B	5.2	6.0	7.2
N	16.8	15.5	10.0

EXHIBIT 3–2 *(Continued)*. **Group Changes in Percentages of "Fireflies" Papers Rated 3 and 4, Primary Trait, Age 9, 1970 to 1974 and 1974 to 1979**



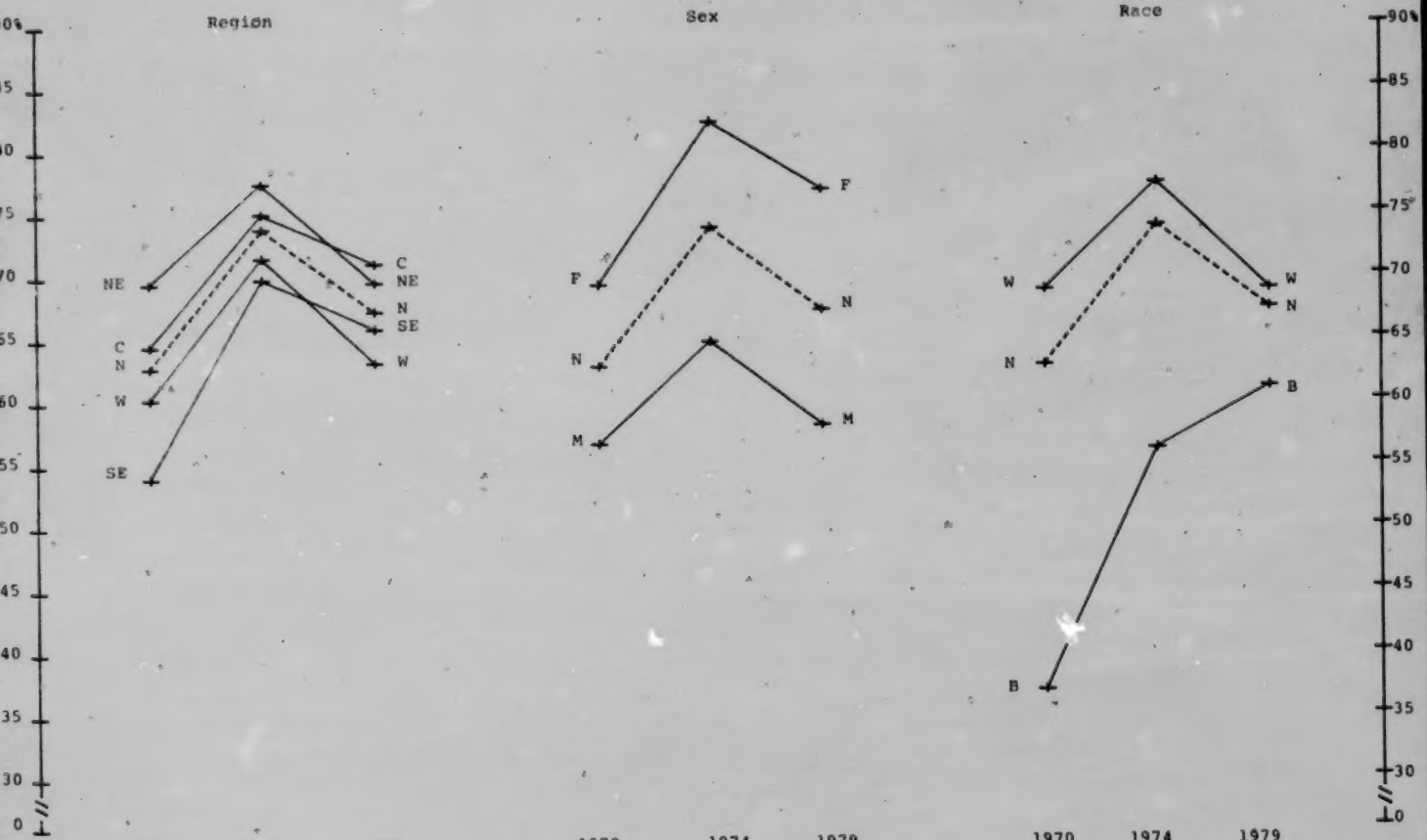
	1970	1974	1979
PHS	23.5%	21.6%	11.4%
GHS	17.4	16.9	11.5
NGH	11.5	11.3	7.2
N	16.8	15.5	10.0

	1970	1974	1979
4	20.3%	17.8%	11.4%
3	5.1	6.2	6.2
N	16.8	15.5	10.0

	1970	1974	1979
AU	26.0%	21.2%	14.5%
R	8.5	23.2	10.6
DU	4.5	4.1	5.9
N	16.8	15.5	10.0

*These population groups represent about one-third of the sample.

EXHIBIT 3-3. Group Changes in Percentages of "Fireflies" Papers Rated 2, 3 and 4, Primary Trait, Age 9, 1970 to 1974 and 1974 to 1979

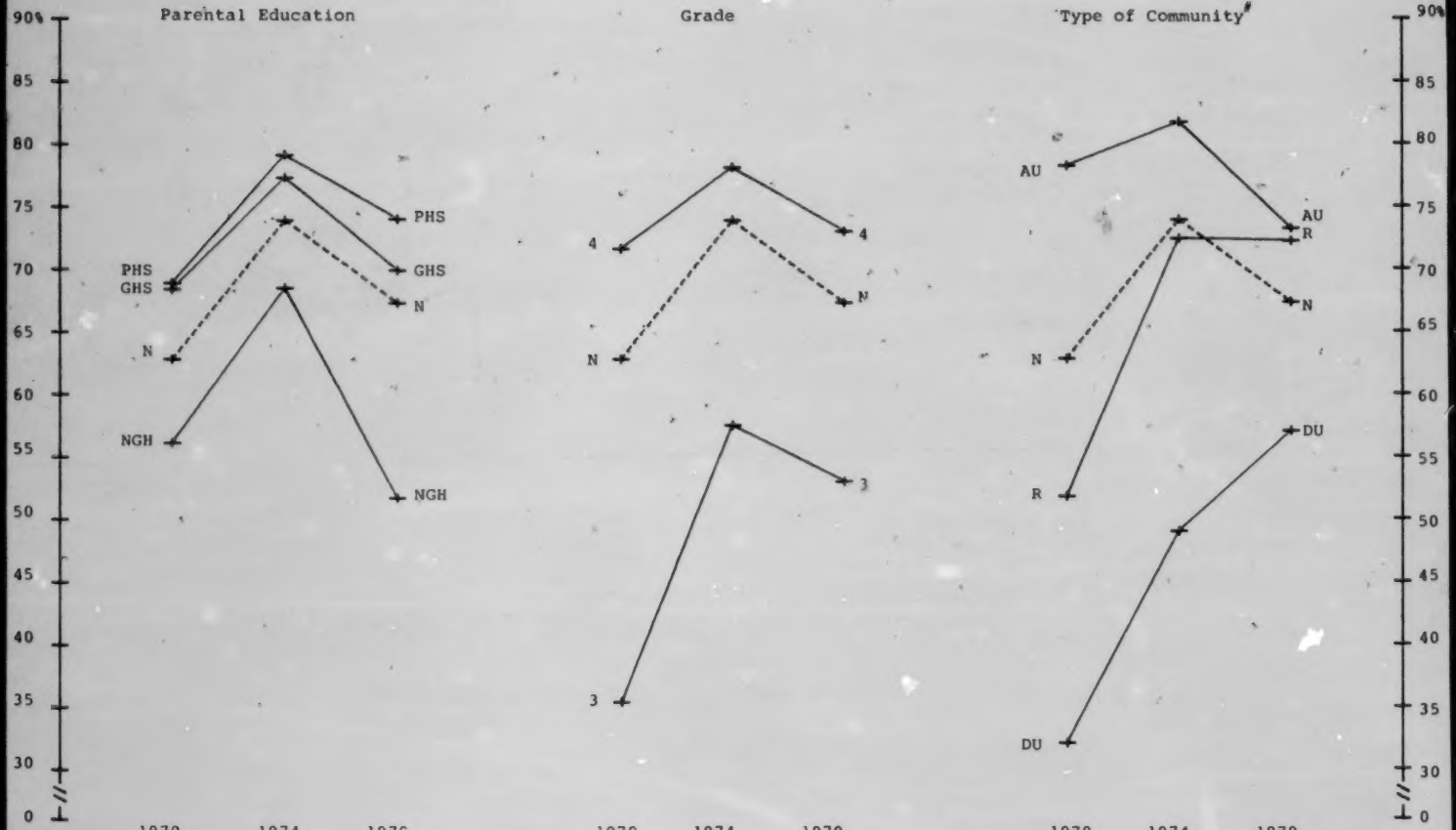


	1970	1974	1979
NE	69.5%	77.5%	69.6%
W	60.3	71.6	63.2
C	64.5	75.1	71.1
SE	54.0	69.9	65.9
N	62.8	73.9	67.3

	1970	1974	1979
F	69.3%	82.3%	76.9%
M	56.6	64.8	58.1
N	62.8	73.9	67.3

	1970	1974	1979
W	68.8%	77.3%	68.8%
B	36.9	56.1	61.0
N	62.8	73.9	67.3

EXHIBIT 3–3 *(Continued).* **Group Changes in Percentages of "Fireflies" Papers Rated 2, 3 and 4, Primary Trait, Age 9, 1970 to 1974 and 1974 to 1979**



	1970	1974	1979
PHS	68.9%	79.1%	74.0%
GHS	68.4	77.3	69.9
NGH	56.1	68.5	51.7
N	62.8	73.9	67.3

	1970	1974	1979
4	71.6%	78.1%	73.0%
3	35.4	57.5	53.0
N	62.8	73.9	67.3

	1970	1974	1979
AU	78.2%	81.7%	73.2%
R	51.8	72.4	72.2
DU	32.1	49.0	57.0
N	62.8	73.9	67.3

*These population groups represent about one-third of the sample.

are considered, the disadvantaged-urban group improved substantially with each assessment, from 32% in 1970, to 49% in 1974, to 57% in 1979. In contrast, the advantaged-urban group did not perform appreciably different from assessment to assessment. The rural group also improved it's relative standing by not declining like the nation for papers rated 3 and 4. When marginal papers are also included, this group improved 16 percentage points from 1970 to 1979.

The Southeast also improved its relative standing to about that of the nation on papers rated 3 and 4 by staying at about the same performance level while the nation declined and improving considerably on papers rated 2, 3 and 4 while the nation did not. Conversely, by declining twice as much as the nation for papers rated 3 and 4, the Northeast lost its relative advantage. Although the Northeast appeared to have improved between the first two assessments for papers rated 2, 3 and 4, in the third assessment it dropped back again, to about the national level.

Another expressive task asked 9-year-olds to imagine what it would be like to be something besides a person—for example, a goldfish, airplane or tree. More specifically, the task was this:

> *Sometimes it is fun to think about what it would be like to be something besides a person. What would it be like to be a goldfish? Or an airplane? Or a horse? Or a tree? Or any other thing?*
>
> *Think about what you would like to be. Write the name of the thing in the box below. Then write about what it is like to be that thing.*

Competent writers would choose some other form of existence and elaborate upon it with appropriate details. Consequently, the lowest-score papers were those that offered little or no expression of what the thing they have chosen to write about is like and the best papers contained concrete details and were organized and unified by narrative frames. The four levels of performance are briefly described below. (See Appendix A for complete exercise and scoring guide.)

1 = *Little or no expression of what the thing is like.* These responses are either very sparse or the information is too vague to help particularize the thing the writer wants to be.

2 = *Moderate expression of what the thing is like.* These responses are moderately detailed. Yet their expression of what the thing is like remains incomplete or fragmented.

3 = *Detailed expression of what the thing is like.* These responses particularize the thing but lack elaboration and unification of detail.

4 = *Consistent and vivid expression of what the thing is like.* These responses are highly detailed and are unified by the presence of some kind of expressive or logical principle.

Table 3-3 shows that this was a difficult task for the majority of the children. In 1974 and 1979, 13% to 14% of the papers received scores of 3 or 4, and 37% to 40% received scores of 2, 3 or 4. A few more may be able to do a minimal job today than could do so five years ago, but the increase is not significant. Probably, since levels 3 and 4 require details that are specific to a particular thing, these will always be difficult criteria for 9-year-old children to meet. The tendency at this age level was to ascribe "human" nonspecific characteristics to whatever was selected. For example, "I would play all day," "I would eat whatever I want," and so on, rather than something along the lines of "I would chase mice, tease the dog and sharpen my claws all day."

TABLE 3-3. Percentages of 9-Year-Olds at Each Primary Trait Score Level, "Goldfish" Exercise, 1974, 1979†

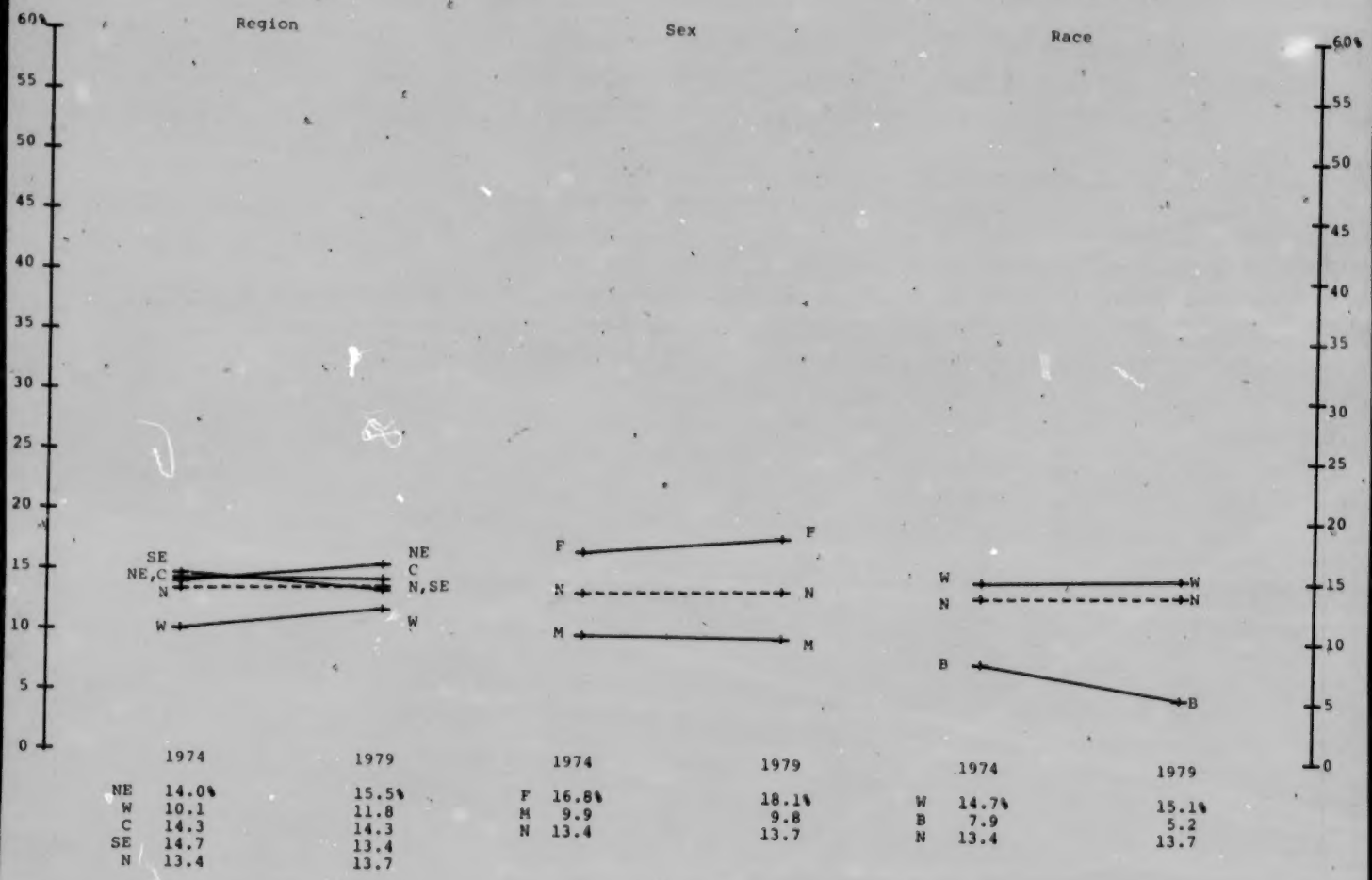
Year	Score Point						
	Non-rateable 0	Little About Thing 1	Some Details 2	Elaborated Thing 3	Unified Detailed Thing 4	Marginal or Better 2, 3 & 4	Competent or Better 3 & 4
1974 (n = 2,611)	4.6%	58.5%	23.5%	11.8%	1.5%	36.9%	13.4%
1979 (n = 2,475)	3.1	56.8	26.4	12.5	1.2	40.1	13.7
Change 1974-79	-1.5	-1.7	2.9	0.7	-0.4	3.3	0.3

†Percentages may not total due to rounding error.

Exhibit 3-4 displays group patterns for 3 and 4 papers, and Exhibit 3-5 displays group results for papers receiving scores of 2, 3 and 4. Table C-3 in Appendix C presents the difference between the performance of each group and that of the nation. When only the top two scores are considered, little seems to have happened that is statistically significant except that the Western group appears to be performing closer to the national level and the rural group appears to have moved about 7% below the nation. Also, students whose parents did not graduate from high school improved to about the national level and those with at least one parent with post high school education lost their relative advantage. Blacks may have fallen slightly farther below the nation, from 6 to 8 percentage points.

When scores 2, 3 and 4 are combined, the advantaged-urban group remained above national levels of performance by perhaps improving more than the nation, while the black students remained below the national level of performance, perhaps losing ground. In addition, the West dropped to 7 points below the nation in 1979, while the Central region improved 11 points, 8 points more than the nation.

EXHIBIT 3–4. Group Changes in Percentages of "Goldfish" Papers Rated 3 and 4, Primary Trait, Age 9, 1974 to 1979



Region	1974	1979
NE	14.0%	15.5%
W	10.1	11.8
C	14.3	14.3
SE	14.7	13.4
N	13.4	13.7

Sex	1974	1979
F	16.8%	18.1%
M	9.9	9.8
N	13.4	13.7

Race	1974	1979
W	14.7%	15.1%
B	7.9	5.2
N	13.4	13.7

EXHIBIT 3–4 *(Continued)*. **Group Changes in Percentages of "Goldfish" Papers Rated 3 and 4, Primary Trait, Age 9, 1974 to 1979**

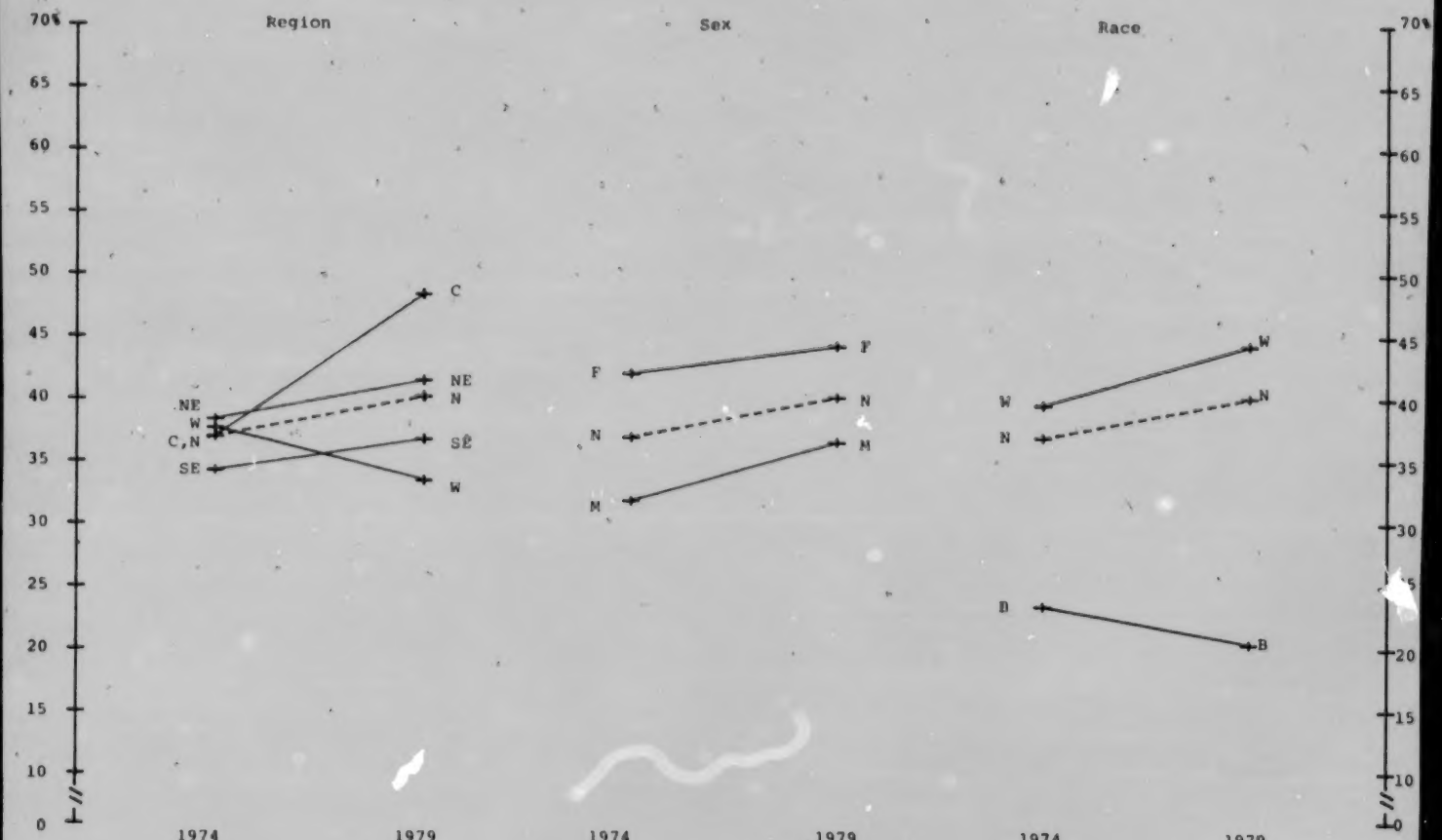
Parental Education	1974	1979
PHS	16.8%	16.0%
GHS	14.3	17.4
NGH	9.5	11.9
N	13.4	13.7

Grade	1974	1979
4	15.9%	16.6%
3	5.3	5.7
N	13.4	13.7

Type of Community*	1974	1979
AU	19.8%	27.7%
R	12.7	6.6
DU	3.0	4.2
N	13.4	13.7

*These population groups represent about one-third of the sample.

EXHIBIT 3–5. Group Changes in Percentages of "Goldfish" Papers Rated 2, 3 and 4, Primary Trait, Age 9, 1974 to 1979

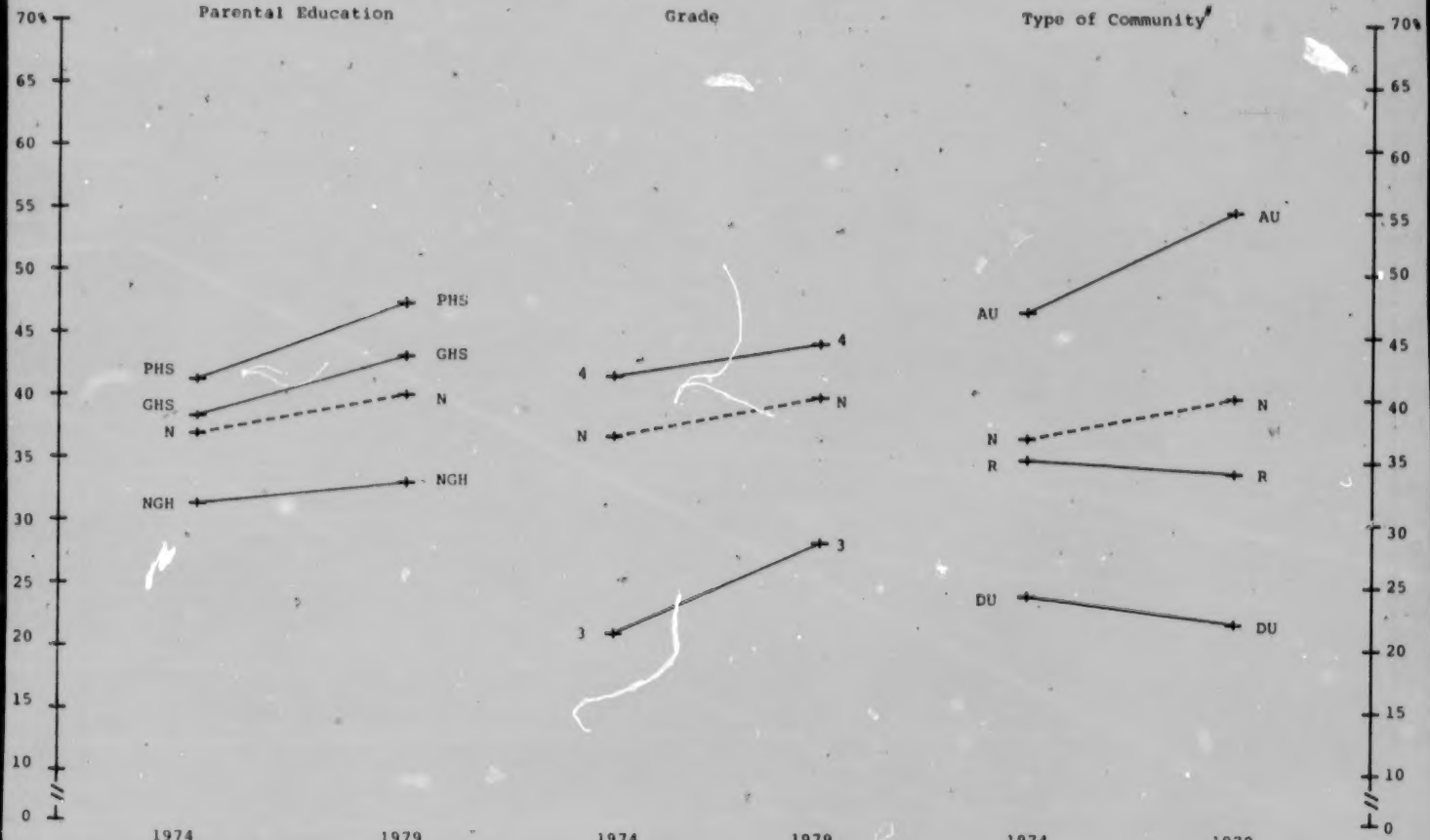


	1974	1979
NE	38.3%	41.3%
W	37.6	33.4
C	36.9	48.3
SE	34.2	36.7
N	36.9	40.1

	1974	1979
F	42.0%	44.2%
M	31.8	36.5
N	36.9	40.1

	1974	1979
W	39.5%	44.3%
B	23.4	20.4
N	36.9	40.1

EXHIBIT 3–5 *(Continued).* **Group Changes in Percentages of "Goldfish" Papers Rated 2, 3 and 4, Primary Trait, Age 9, 1974 to 1979**



Parental Education	1974	1979
PHS	41.2%	47.4%
GHS	38.3	43.2
NGH	31.3	33.1
N	36.9	40.1

Grade	1974	1979
4	41.7%	44.4%
3	21.2	28.5
N	36.9	40.1

Type of Community*	1974	1979
AU	47.0%	55.0%
R	35.2	34.1
DU	24.3	22.1
N	36.9	40.1

*These population groups represent about one-third of the sample.

b. Persuasive Writing

Expressive writing provides training in a multitude of skills and strategies for elaborating, being precise and making concrete what one wants to say. These skills are useful in all the other modes of discourse as well. Persuasive writing calls for additional skills in argument, logic and presentation.

For a persuasive writing task, 9-year-olds were asked to imagine they were moving into a new apartment where dogs were banned and had to write the landlord a letter asking that they be allowed to keep their puppy. The task requires a letter that describes the situation and presents arguments that might change the landlord's mind—either reasonable arguments or appeals to the landlord's feelings. Accordingly, the PTS scoring (detailed in Appendix A) defined the following four levels of quality:

1 = *Letters lacking appeals/reasons.* These letters either contain no appeals or only name inappropriate or vague reasons. They may be confusing as to their request, threatening or make a request but offer no reasons.

2 = *Letters with limited appeals/reasons.* Letters in this category vary, but all are in some sense underdeveloped. Some offer only minimal appeals, others supply reasons but fail to state the request, and still others become belligerent.

3 = *Letters substantiated with appropriate appeals/reasons.* Generally, these letters include a request substantiated with approximately three concrete appeals.

4 = *Letters developed and substantiated with appropriate appeals/reasons.* These letters are organized such that they operate as a unified piece of persuasion. They tend to have openings, closings and numerous appropriate appeals.

Table 3-4 displays the percentage of papers falling in each category for the two assessments.

TABLE 3-4. Percentages of 9-Year-Olds at Each Primary Trait Score Level, "Puppy Letter" Exercise, 1974, 1979†

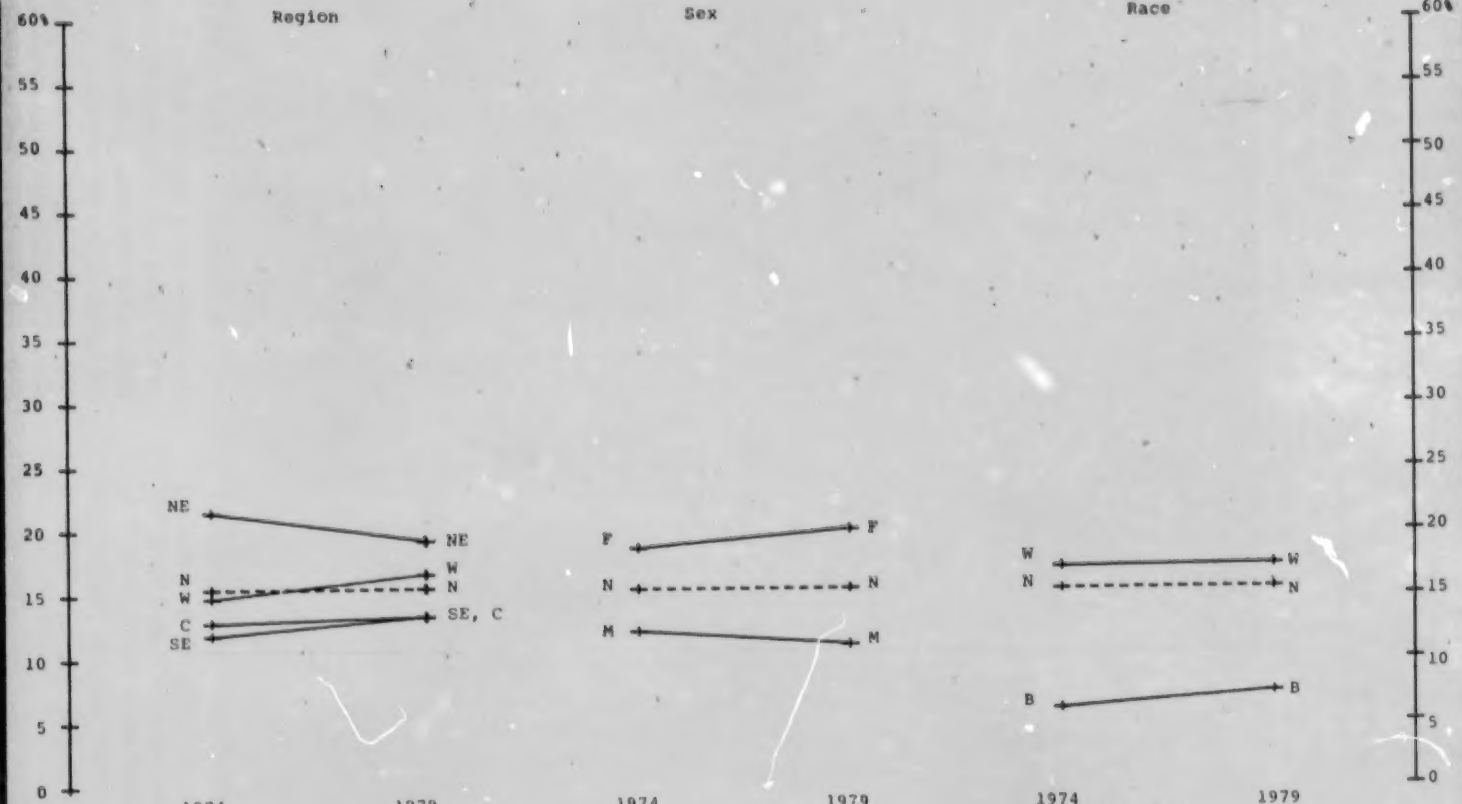
Year	Score Point						
	Non-rateable 0	No Appeals 1	Some Appeals 2	Good Appeals 3	Unified Letter 4	Marginal or Better 2, 3 & 4	Competent or Better 3 & 4
1974 (n = 2,643)	9.3%	31.0%	44.2%	12.[illegible]%	2.6%	59.7%	15.5%
1979 (n = 2,494)	6.3	32.1	46.1	13.4	2.2	61.7	15.6
Change 1974-79	-3.0*	1.0	1.9	0.4	-0.3	2.0	0.1

*Statistically significant at the .05 level.
†Percentages may not total due to rounding error.

The data indicate that this, too, was a difficult task for 9-year-olds, only a sixth of whom scored 3 or 4. That proportion has not changed from 1974 to 1979. If level 2 letters are included, about 60% of the children can at least minimally perform the task, and that percentage, too, has remained stable since 1974.

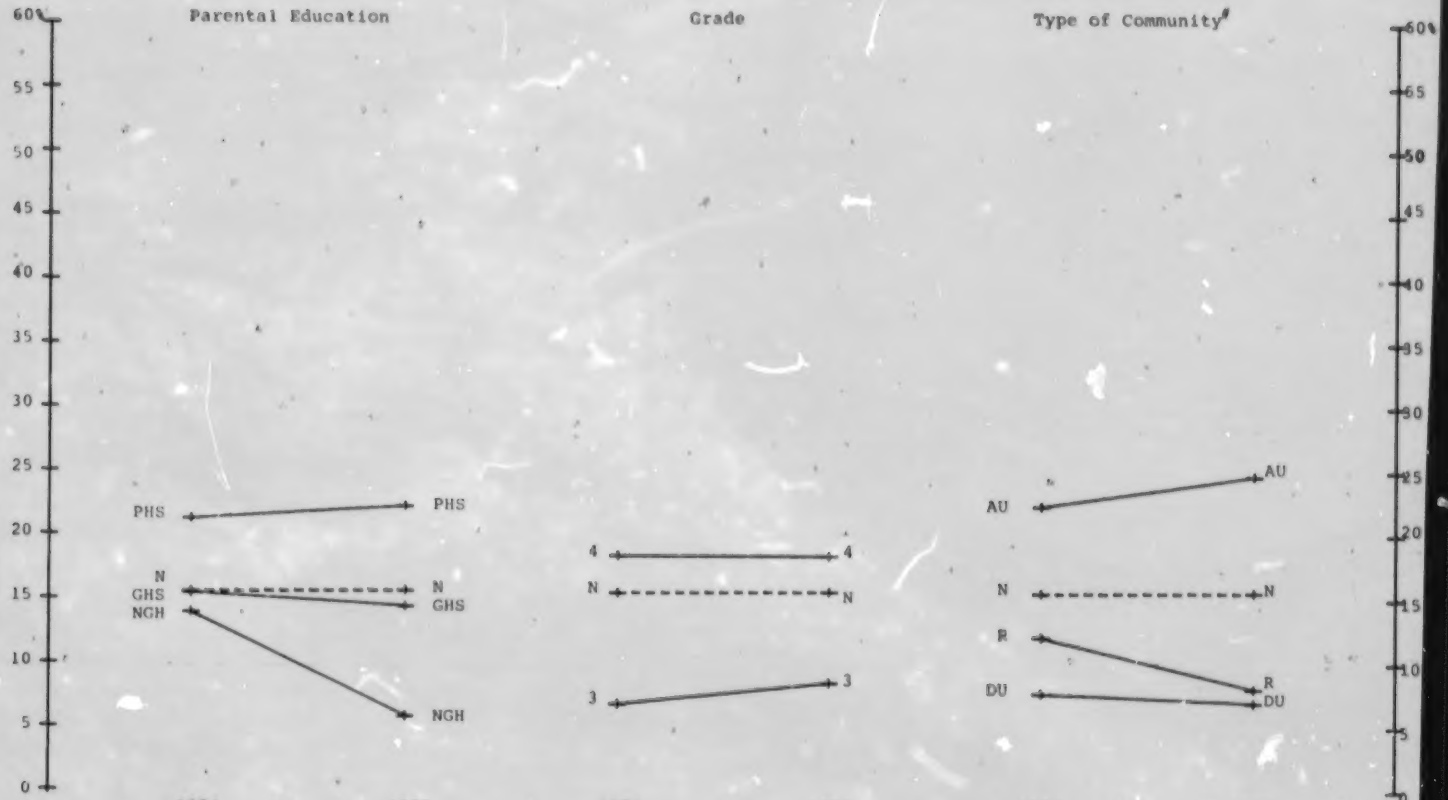
Exhibits 3-6 and 3-7 display group patterns for this exercise for 3 and 4 as well as 2, 3 and 4 level papers. Table C-4 in Appendix C presents the differences between group performance and that of the nation. If one examines only the changes for letters scored 3 and 4, one sees a widening of the boy-girl gap from 6 to 9 percentage points; a precipitous decline for the not-graduated-from-high-

EXHIBIT 3–6. Group Changes in Percentages of "Puppy Letter" Papers Rated 3 and 4, Primary Trait, Age 9, 1974 to 1979



	Region		Sex		Race	
	1974	1979	1974	1979	1974	1979
NE	21.5%	19.3%				
W	14.8	16.7				
C	12.9	13.4				
SE	11.9	13.4				
N	15.5	15.6				
F			18.7%	20.2%		
M			12.2	11.2		
N			15.5	15.6		
W					17.2%	17.4%
B					6.1	7.4
N					15.5	15.6

EXHIBIT 3–6 *(Continued).* **Group Changes in Percentages of "Puppy Letter" Papers Rated 3 and 4, Primary Trait, Age 9, 1974 to 1979**



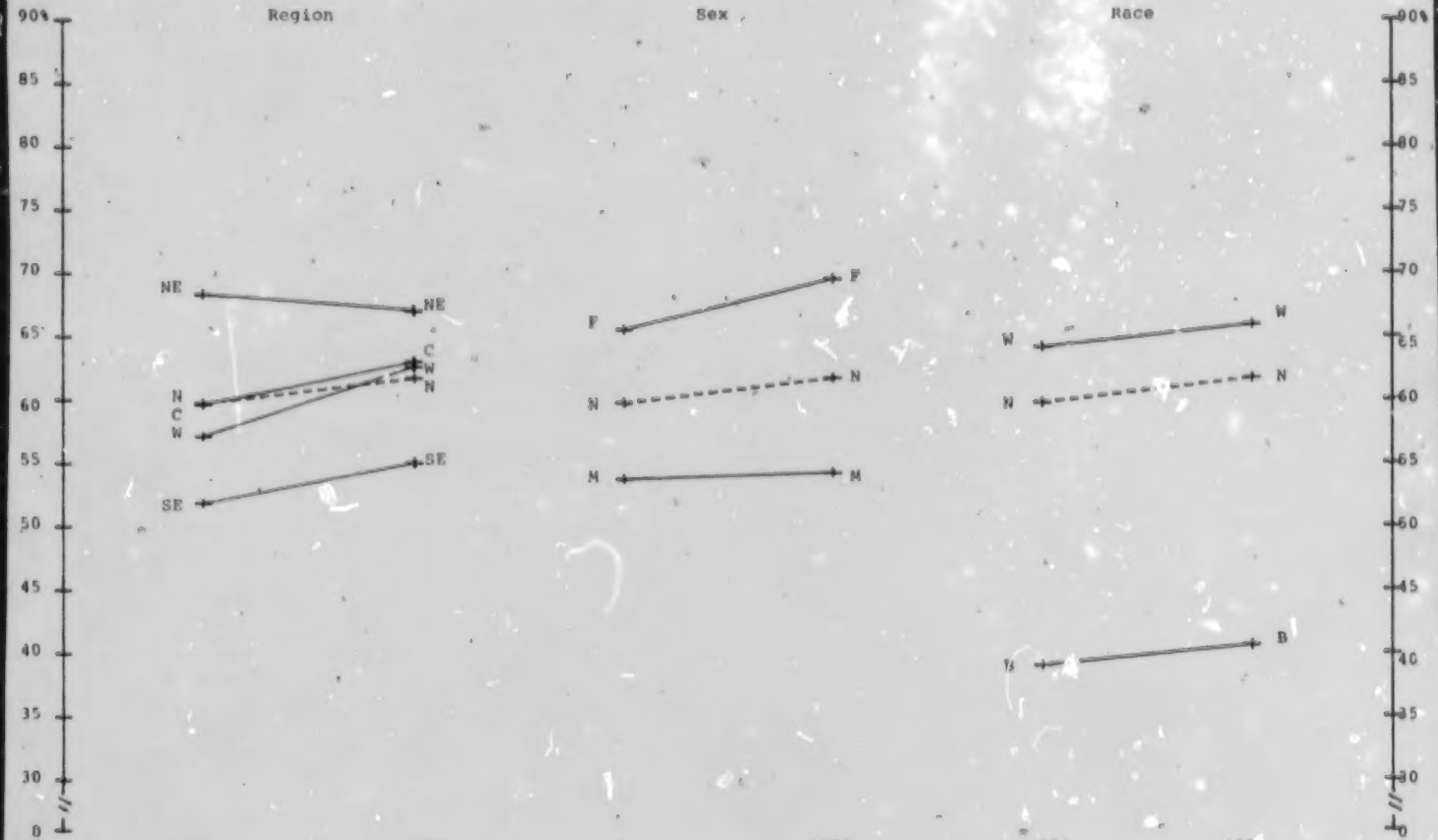
	1974	1979
PHS	21.2%	22.2%
GHS	15.4	14.4
NGH	13.9	5.8
N	15.5	15.6

	1974	1979
4	18.4%	18.4%
3	6.8	8.5
N	15.5	15.6

	1974	1979
AU	22.3%	24.7%
R	12.1	8.1
DU	7.7	7.0
N	15.5	15.6

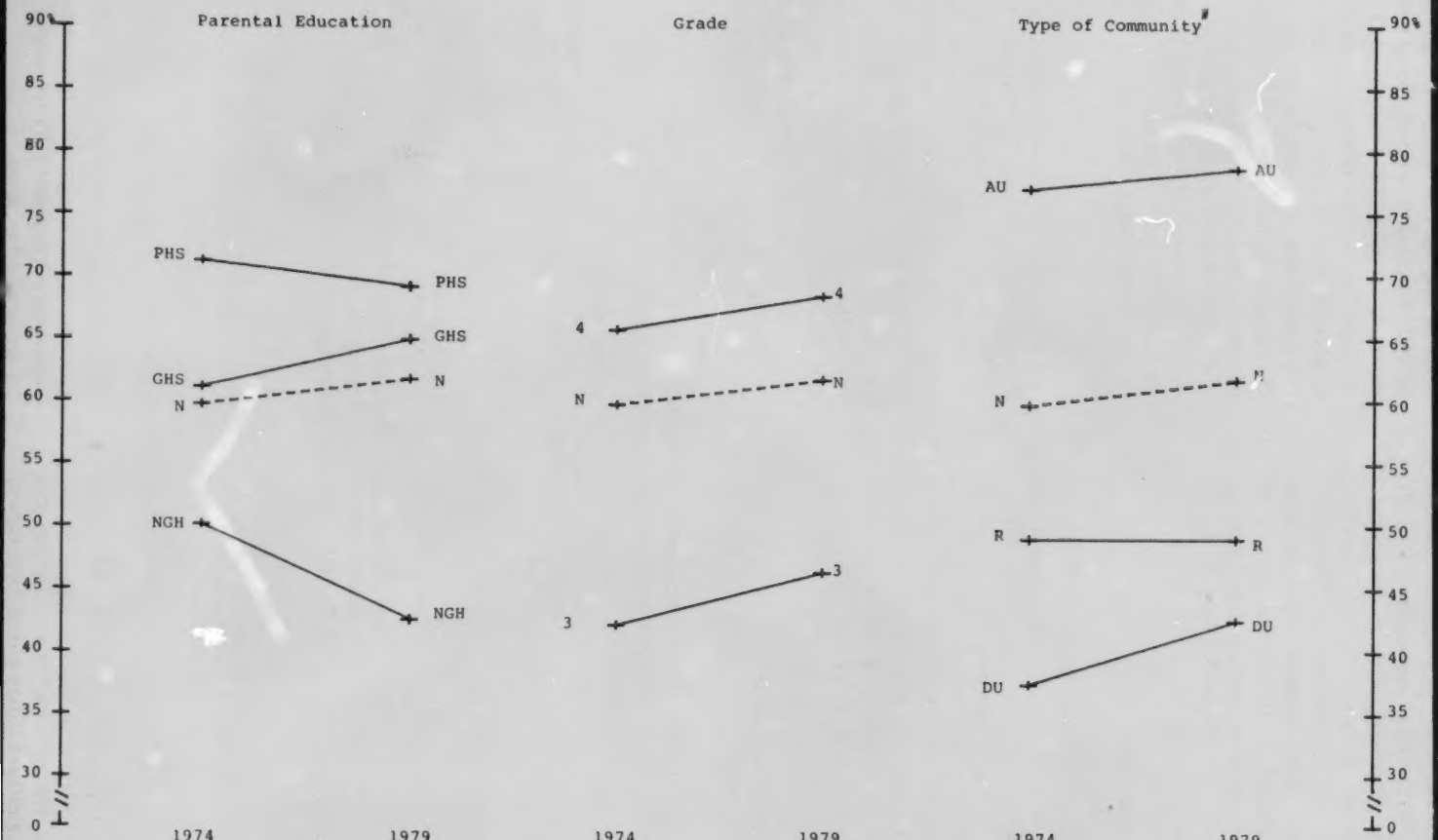
*These population groups represent about one-third of the sample.

EXHIBIT 3–7. Group Changes in Percentages of "Puppy Letter" Papers Rated 2, 3 and 4, Primary Trait, Age 9, 1974 to 1979



	1974	1979		1974	1979		1974	1979
NE	68.3%	67.0%	F	65.5%	69.5%	W	64.1%	65.9%
W	57.1	62.6	M	53.7	54.2	B	39.0	40.6
C	59.6	63.0	N	59.7	61.7	N	59.7	61.7
SE	51.8	55.0						
N	59.7	61.7						

EXHIBIT 3–7 *(Continued).* **Group Changes in Percentages of "Puppy Letter" Papers Rated 2, 3 and 4, Primary Trait, Age 9, 1974 to 1979**



	1974	1979
PHS	71.2%	69.1%
GHS	61.1	64.9
NGH	50.1	42.5
N	59.7	61.7

	1974	1979
4	65.7%	68.4%
3	42.1	46.3
N	59.7	61.7

	1974	1979
AU	77.0%	78.6%
R	49.0	49.0
DU	37.4	42.5
N	59.7	61.7

#*These population groups represent about one-third of the sample.*

school group (from -2 to -10 below the nation); and a decline for the rural youngsters (-3 to -8). The same trends generally hold when score point 2 letters are included. In contrast to the "Fireflies" narrative task, but similar to the "Goldfish" expressive task, disadvantaged-urban students showed little change relative to the nation, remaining about 9 points below the nation for letters rated 3 and 4 and about 19 points below the nation for letters rated 2, 3 and 4.

c. Explanatory Writing

Sometimes it is necessary to write letters to straighten out a situation or order something through the mail in a business context. In addition to their other tasks, 9-year-olds were asked to order a poster calendar through the mail. Although this exercise was only given in 1979 and no results about changes in performance are available, the 1979 results indicate that 9-year-olds have considerably less difficulty with more straightforward tasks.

The assignment presented students with an advertisement for a free poster calendar and asked them to request that calendar, naming which of several choices they wanted. (See Appendix A for complete exercise and scoring guide.) The writers needed to communicate the information necessary to insure receipt of a calendar. Level 1 papers left out some crucial information like any reference to the calendar or only gave an incomplete name and address; level 2 papers included this information, but failed to state a choice; and level 3 papers included a name and address and requested a particular calendar. There was no score point 4, on the grounds that for 9-year-olds, a successful letter was sufficient.

Tables 3-5 and 3-6 give the national results for the "Poster Calendar" exercise. Results for groups are found in Appendix C. About half the 9-year-olds were able to include all the pertinent information in their letters. When each piece of information is looked at separately, about three-fourths included a greeting and their name, and four-fifths made a request and stated their choice. The weakest spot seemed to be the writer's address: only about three-fifths of the letters included one.

TABLE 3-5. Percentages of 9-Year-Olds at Each Primary Trait Score Level, "Poster Calendar" Exercise, 1979

Year	Score Point				
	Non-rateable	Incomplete	No Choice	Successful	Marginal or Better
	0	1	2	3	2 & 3
1979 (n = 2,492)	8.3%	39.3%	3.4%	48.9%	52.3%

TABLE 3-6. Percentages of 9-Year-Olds Providing Various Kinds of Information in "Poster Calendar" Exercise, 1979

Greeting	73.8%
Name of sender	74.6
Address of sender	58.3
Make a request	87.1
State choice	80.2

Table C-5 in Appendix C presents group results. The percentage of papers rated 3 was 57% for girls, 58% for the post-high-school group and 66% for the advantaged-urban group. In contrast, the percentage for boys was 41%, 20% for black youngsters, 25% for the not-graduated-from-high-school group and 27% for those living in disadvantaged-urban areas.

B. What Are the Characteristics of the Papers? Descriptions of Cohesion, Syntax and Mechanics

In addition to being judged for overall (holistic) and rhetorical (PTS) quality, some of the papers written by 9-year-olds were further categorized to enable as detailed a description as possible of the kind of writing National Assessment collects. Some of the cohesion, syntax and mechanics characteristics described in the following sections undoubtedly relate to the quality of the papers; some do not. All of them help us to better understand the nature of the papers written by the 9-year-olds, the complex interrelationships among various writing skills and the stability over time of certain features of the papers.

1. Cohesion

Cohesive ties are the devices writers use to link ideas and give their narratives coherence. There are many kinds of cohesive ties and strategies. Some primary kinds—lexical cohesion, conjunction, reference, substitution and ellipsis—are illustrated in Appendix A. In addition to using these devices, a writer can try to achieve coherence by using rhythm, repetition, story frames, retrospective summing up and other such strategies to bind parts of the narrative and guide the reader. Scorers were trained to recognize all these approaches and then asked to categorize the "Fireflies" papers—the same ones scored for primary trait—using the following scoring guide:

Cohesion Scoring Guide Categories

1 = *Little or no evidence of cohesion:* basically clauses and sentences are not connected beyond pairings.

2 = *Attempts at cohesion:* evidence of gathering details but little or no evidence that these details are meaningfully ordered. In other words, very little would seem lost if the details were rearranged.

3 = *Cohesion:* details are both gathered and ordered. Cohesion does not necessarily lead to coherence, to the successful binding of parts so that the sense of the whole discourse is greater than the sense of its parts. In pieces of writing that are cohesive rather than coherent, there are large sections of details that cohere but these sections stand apart *as* sections.

4 = *Coherence:* while there may be a sense of sections within the piece of writing, the sheer number and variety of cohesion strategies bind the details and sections into a wholeness. This sense of wholeness can be achieved by a saturation of syntactic repetition throughout the piece and/or by closure that retrospectively orders the entire piece and/or by general statements that organize the whole piece.

Table 3-7 displays the percentage of papers in each cohesion category on the "Fireflies" exercise for 1970, 1974 and 1979. Results for 2, 3 and 4 combined are not presented because level 2 papers are not really cohesive. As the bottom line in the table indicates, there was little difference between the results for 1970 and those for 1979. The proportion of cohesive papers (3 and 4) went from 22% to 26% and down again to 22%.

TABLE 3-7. Percentages of 9-Year-Olds at Each Cohesion Score Level, "Fireflies" Exercise, 1970, 1974, 1979†

Year	Score Point					
	Non-rateable 0	Inadequate 1	Attempts at Cohesion 2	Cohesion 3	Cohesion and Coherence 4	Cohesion or Better 3 & 4
1970 (n = 2,466)	5.4%	29.1%	43.1%	20.3%	2.0%	22.3%
1974 (n = 2,573)	4.3	24.8	45.4	23.8	1.7	25.5
1979 (n = 2,553)	3.3	28.8	46.0	20.9	1.0	21.9
Change						
1970-74	-1.2*	-4.3*	2.3	3.4	-0.3	3.1
1974-79	-1.0	4.0*	0.6	-2.9	-0.7	-3.6
1970-79	-2.0*	-0.3	2.9	0.5	-1.0*	-0.5

*Statistically significant at the .05 level.
†Percentages may not total due to rounding error.

The cohesion results parallel the trend for the PTS ratings for marginal or better papers noted in Table 3-2. Although substantially fewer papers (22-26% compared with 63-74%) were judged cohesive, both ratings indicated an improvement between the first two assessments with a decline in the third back toward the original percentages.

Exhibit 3-8 displays group patterns and Table C-2 in Appendix C presents specific differences for groups. Several interesting points emerge from these data. First, the percentage of black youngsters receiving scores of 3 or 4 rose steadily from assessment to assessment, with the result that the blacks gained ground, halving their relative difference from the national level.

Second, the disadvantaged-urban group also improved from assessment to assessment, cutting its difference from more than 16 points below the nation to 7 points below.

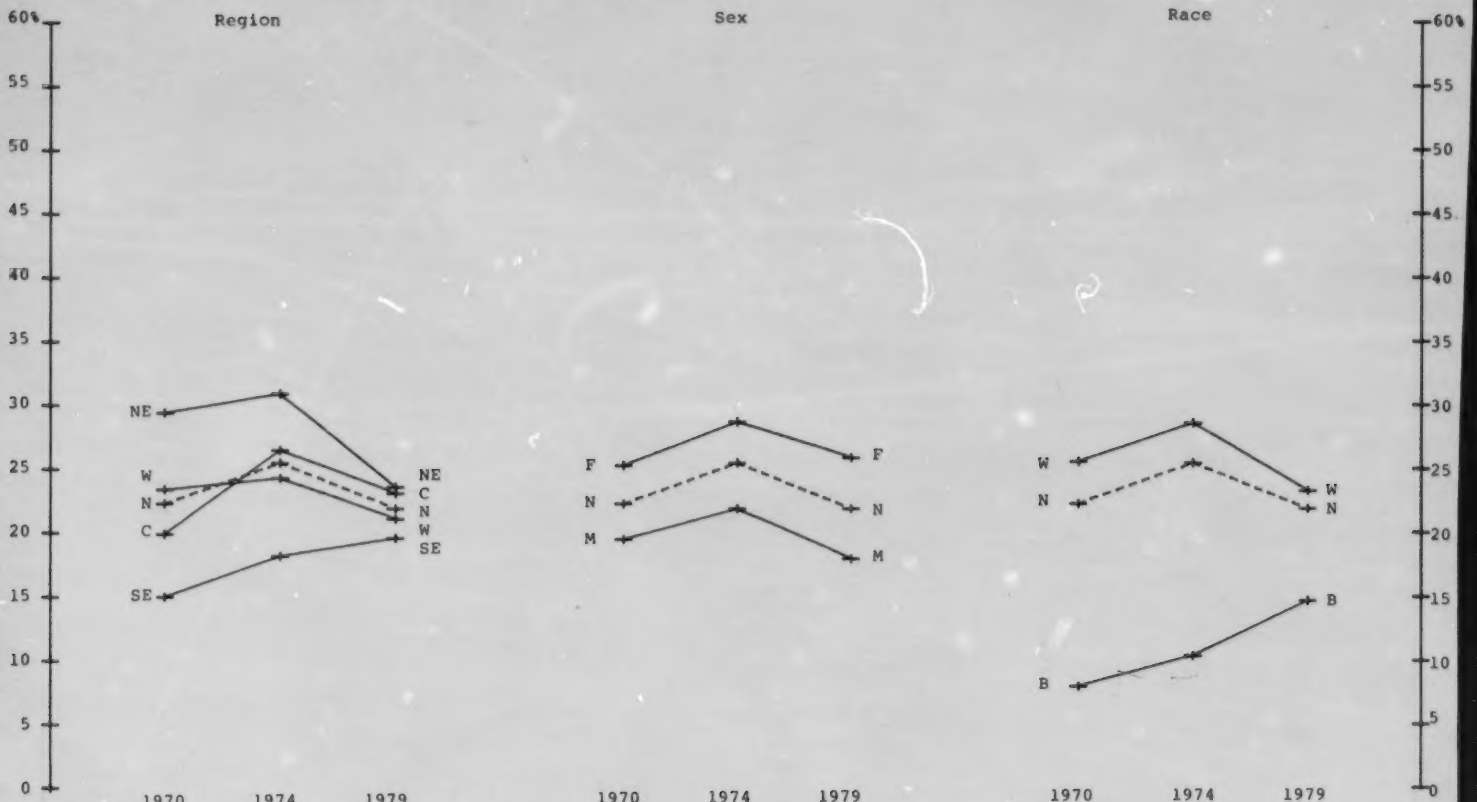
Third, the Southeastern group improved while the nation stayed the same, so its relative position changed from 7 points to only 2 points below the nation. The Northeast declined 5%, losing its relative advantage.

Fourth, rural students improved dramatically (21%) from the first assessment to the second. Although they declined in the third assessment, they still showed a 14% improvement for the nine years, which changed their relative standing from 13 points below the nation in 1970 to 2 points above it in 1979.

Fifth, the difference between the percentages for boys and girls increased from 6 to 8 points so that in 1979, girls performed significantly above the nation and boys significantly below.

To gain additional information about changes in coherence, the "Kangaroo" papers were subjected to a different and less refined, but related analysis. Using a procedure developed for previous assessments, readers categorized paragraphs as coherent and incoherent. Table 3-8 displays the results of this process for all papers, as well as for poor papers (rated 1 and 2 on the holistic scale) and good papers (rated 3 or 4). The table reveals several things. First, in all three assessments there was a significant difference between good and poor papers in terms of their proportions of coherent paragraphs. Although this difference increased somewhat in 1974, by 1979 it had decreased back to the original 36% evidenced in 1970.

EXHIBIT 3–8. Group Changes in Percentages of "Fireflies" Papers Rated 3 and 4 Cohesion, Age 9, 1970 to 1974 and 1974 to 1979

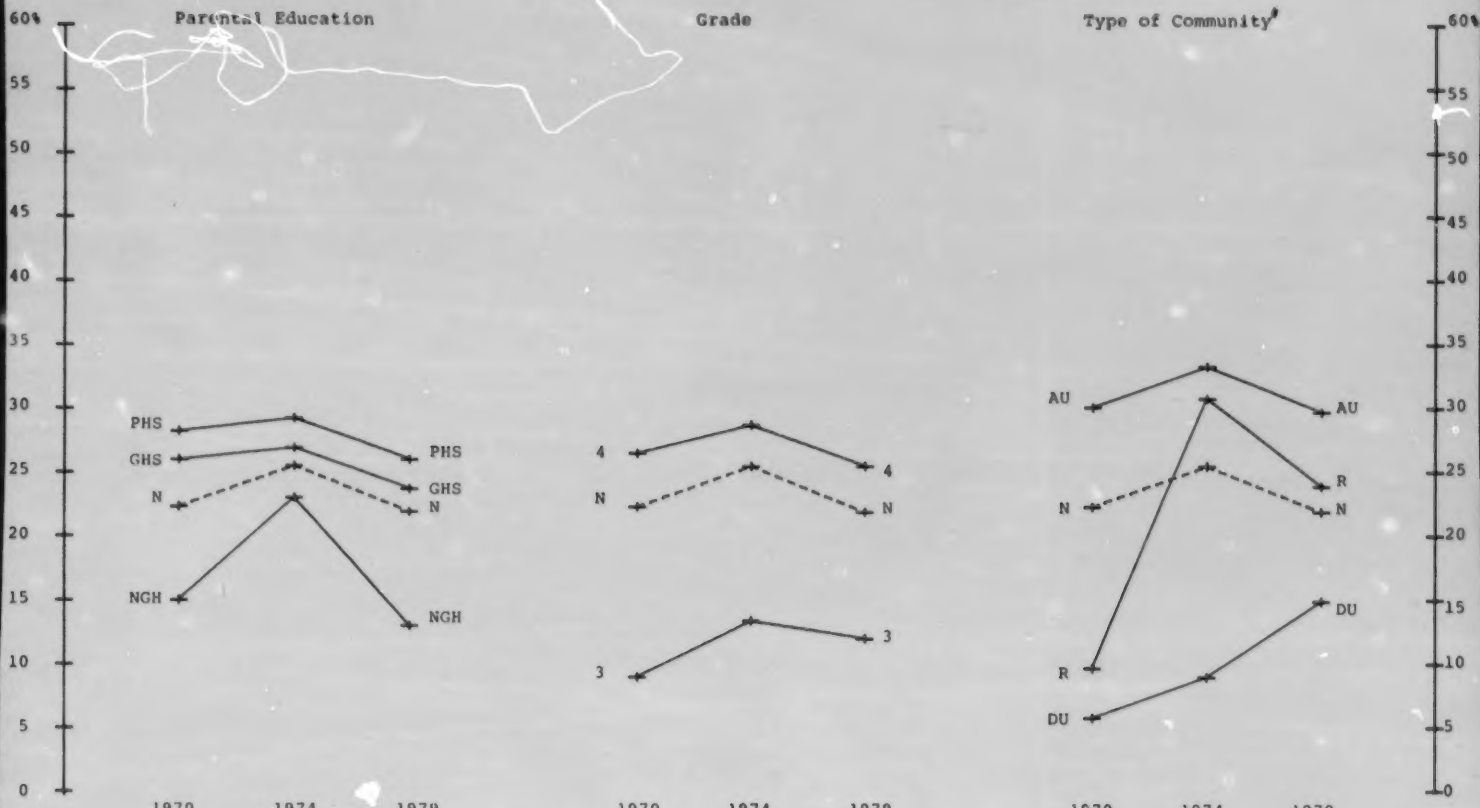


	1970	1974	1979
NE	29.4%	30.9%	23.6%
W	23.4	24.3	21.1
C	19.9	26.5	23.1
SE	15.0	18.2	19.6
N	22.3	25.5	21.9

	1970	1974	1979
F	25.3%	28.7%	25.9%
M	19.5	21.9	18.0
N	22.3	25.5	21.9

	1970	1974	1979
W	25.6%	28.6%	23.3%
B	8.0	10.4	14.7
N	22.3	25.5	21.9

EXHIBIT 3–8 *(Continued).* **Group Changes in Percentages of "Fireflies" Papers Rated 3 and 4, Cohesion, Age 9, 1970 to 1974 and 1974 to 1979**



	1970	1974	1979
PHS	28.2%	29.2%	26.0%
GHS	26.0	26.9	23.7
NGH	15.0	23.0	13.0
N	22.3	25.5	21.9

	1970	1974	1979
4	26.5%	28.7%	25.5%
3	9.0	13.4	12.0
N	22.3	25.5	21.9

	1970	1974	1979
AU	30.1%	33.3%	29.7%
R	9.7	30.8	23.9
DU	5.8	9.0	14.9
N	22.3	25.5	21.9

*These population groups represent about one-third of the sample.

TABLE 3-8. Average Percentages of Coherent Paragraphs, Good and Poor "Kangaroo" Papers, Age 9, 1970, 1974, 1979†

	1970 (n = 384)	1974 (n = 409)	1979 (n = 494)	Change 1970-74	Change 1974-79	Change 1970-79
Nation	56.9%	42.5%	71.9%	-14.4%*	29.5%*	15.0%*
Poor (1 & 2)	40.8	20.5	53.9	-20.3*	33.4*	13.1*
Good (3 & 4)	77.4	69.3	89.6	- 8.1	20.3*	12.2*

*Statistically significant at the .05 level.
†Percentages may not total due to rounding error.

Second, in contrast to the "Fireflies" exercise where few changes occurred in the percentage of coherent papers, with the "Kangaroo" papers there was a significant decline in the percentage of coherent paragraphs (particularly for poor papers) between 1970 and 1974. This was followed by a dramatic improvement in 1979. In 1979, almost three-fourths of the paragraphs were judged to be coherent. Although both good and poor papers improved, the poor papers improved the most, more than canceling out the earlier declines. From 1970 to 1979, the overall improvements were uniform for good and poor writers.

2. Syntax

Both the "Fireflies" and "Kangaroo" papers were examined to see if there were any changes over the nine years in the numbers and types of sentences in the papers.

Table 3-9 displays some characteristics, including length and proportions of sentence types, of the "Fireflies" and "Kangaroo" papers. Several points stand out. First, not much has changed over the decade. The papers were roughly the same length, although the "Fireflies" narratives grew one sentence shorter while the "Kangaroo" papers became one sentence longer. Average word length, four letters, was identical for both sets of papers in the different years. Also, both employed roughly the same proportions of simple (46-50%), compound (5-11%) and complex (28-21%) sentences. The "Kangaroo" papers did contain more sentences with phrases. The remainder of the sentences in both papers (about 20-22%) were run-on sentences and fragments. These, along with other errors such as awkwardness, spelling and word-choice, are discussed shortly under mechanics.

Second, averages can be deceptive. Notice, for example, that in the 1979 "Fireflies" papers the average percent of complex sentences was 21%, but half the papers had none at all!

And, third, the papers were very short—half the "Fireflies" papers consisted of only three or fewer sentences. Still, the figures discussed here cannot tell us much about quality. They are useful primarily for describing the great range and variety in the papers and the relative stability of such distributions and proportions across time for particular writing tasks.

Table 3-10 displays occurrences of various kinds of embedding and modification in the "Fireflies" papers. Table 3-10 uses terms that are perhaps less familiar to general readers. Most research on syntax or sentence forms is done in terms of the "T-unit," instead of the sentence, in order to examine the amount and kind of modification and embellishment writers use. Subordination skills—the processes by which writers embed information in their sentences—have been shown to develop in writers as they mature, enabling older and better writers to convey more information more efficiently. Syntax analysts use the T-unit—an independent clause and all its modifying words, phrases and clauses—because it enables them to focus upon embedding more precisely than the sentence. This approach takes into account subordination and coordination between words, phrases and subordinate clauses. It does not take into account coordination between main clauses—the tendency to string T-units together rather than

TABLE 3-9. Means and Percentiles for Characteristics of Two Narrative Papers, Age 9, 1970, 1974, 1979†

	1970					1974					1979					Mean Change 1970-79
	Mean	Q1	Median	Q3	90th	Mean	Q1	Median	Q3	90th	Mean	Q1	Median	Q3	90th	
"Fireflies"																
# sentences/essay	5	2	3	6	8	5	2	4	6	10	4	2	[illegible]	6	9	-0.3
# words/essay	47	21	35	58	85	56	29	47	72	100	50	23	[illegible]	75	112	3.6
Avg. # words/sentence	13	8	10	14	22	16	8	12	18	29	15	8	11	18	31	2.7*
Avg. # letters/word	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0.0
% minor sentences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.1
% simple sentences	55	33	57	86	100	48	25	50	75	100	50	17	50	78	100	-5.6*
% compound sentences	6	0	0	0	25	9	0	0	0	27	11	0	0	0	33	4.2*
% complex sentences	20	0	0	33	50	20	0	0	33	50	21	0	0	33	57	0.7
% simple sentences with phrases	13	0	0	20	43	12	0	0	18	43	13	0	0	20	46	-0.2
% complex sentences with phrases	7	0	0	0	19	5	0	0	0	25	8	0	0	0	25	0.9
Number of respondents			556					584					596			
"Kangaroo"																
# sentences/essay	4	2	3	5	8	5	2	4	6	9	5	2	4	6	9	0.8*
# words/essay	45	25	37	60	83	54	31	46	71	96	56	30	47	74	98	10.8*
Avg. # words/sentence	14	8	11	15	24	15	8	11	16	27	15	8	11	17	25	0.9
Avg. # letters/word	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	-0.0
% minor sentences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.2
% simple sentences	46	15	50	71	100	43	17	44	67	86	46	17	50	67	100	-0.3
% compound sentences	6	0	0	0	20	6	0	0	0	25	5	0	0	0	24	-1.4
% complex sentences	26	0	20	42	67	27	0	20	43	67	28	0	20	50	67	1.6
% simple sentences with phrases	36	0	33	50	75	29	0	29	50	67	33	0	33	50	67	-3.1
% complex sentences with phrases	21	0	0	33	50	21	0	14	33	60	23	0	13	33	67	2.1
Number of respondents			384					409					494			

**Statistically significant at the .05 level.*
†Figures for means and percentiles have been rounded to the nearest whole number.

TABLE 3-10. Means and Percentiles for Number of T-Units and T-Unit Constituents, Narrative Papers, Age 9, 1970, 1974, 1979†

	1970					1974					1979					Mean Change 1970-79
	Mean	Q1	Median	Q3	90th	Mean	Q1	Median	Q3	90th	Mean	Q1	Median	Q3	90th	
# T-units/essay	5.5	2.0	4.0	7.0	10.0	6.4	3.0	5.0	8.0	12.0	5.4	2.0	4.0	8.0	12.0	-0.08
Avg. # words/T-unit	9.2	6.9	8.2	10.8	13.3	10.0	7.2	8.8	11.3	14.5	10.4	7.5	9.1	11.8	15.5	1.17*
Avg. # subordinations (embedding)/T-unit	1.0	0.5	0.9	1.3	2.0	1.0	0.5	0.9	1.3	2.0	1.1	0.5	1.0	1.4	2.0	0.14*
Avg. # subordinate clauses/T-unit	0.2	0.0	0.1	0.4	0.7	0.3	0.0	0.2	0.4	0.7	0.3	0.0	0.2	0.4	0.8	0.03
Avg. # words/clause	7.0	5.4	6.5	7.9	10.2	7.6	5.6	6.8	8.2	10.3	7.4	5.6	6.7	8.5	11.0	0.40*
Avg. # nominalizations/T-unit	0.2	0.0	0.1	0.3	0.6	0.2	0.0	0.1	0.3	0.5	0.3	0.0	0.1	0.3	0.7	0.08
Avg. # adjectival (noun) modifications/T-unit	0.6	0.3	0.5	1.0	1.3	0.6	0.3	0.5	0.9	1.3	0.7	0.3	0.5	1.0	1.3	0.03
Avg. # relative clauses/T-unit	0.1	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.2	0.3	0.04*
Avg. # adjectives/T-unit	0.2	0.0	0.1	0.4	0.7	0.2	0.0	0.1	0.3	0.6	0.2	0.0	0.1	0.4	0.7	-0.01
Avg. # adverbial modifications/T-unit	0.1	0.0	0.0	1.2	0.3	0.2	0.0	0.0	0.2	0.5	0.2	0.0	0.0	0.2	0.5	0.02
Avg. # intra-T-unit coordinations/T-unit	0.3	0.0	0.1	0.4	1.0	0.4	0.0	0.2	0.5	1.0	0.5	0.0	0.2	0.5	1.0	0.16*
Avg. # subordinations and intra-T-unit coordinations/T-unit	1.2	0.6	1.0	1.5	2.3	1.3	0.6	1.0	1.6	2.3	1.4	0.7	1.1	1.8	2.8	0.25*
Number of respondents			556					584					596			

Statistically significant at the .05 level.
†Figures for means and percentiles have been rounded to the nearest tenth.

embed information. The table tells us that, in 1979, the average narrative paper contained about five and one-half T-units or separate subject-verb constructions or statements. This is more than the number of sentences (4.2), which indicates that some of the sentences were compound or run-ons (strings of independent clauses).

The first point to note from Table 3-10 is that the average number of words per T-unit, the average number of words per clause, the average number of subordinations and intra-T-unit coordinations—all indicators of syntactic maturity—have increased slightly over the nine years. The second point is that the average number of subordinations and intra-T-unit coordinations, 1.4, tells us that in each T-unit there was embedded one or maybe two pieces of information that were not part of the basic (kernel) subject-verb predication. This was primarily done through subordination (1.1). There are two ways to look at the subordination: in terms of the units used (clauses, phrases or words) and in terms of the way those units function (as nouns, adjectives or adverbs). The table indicates that the functions were primarily adjectival. There were very few nominalizations (.3) and adverbial modifications (.2), compared with adjectival constructions (.7). The units were some clauses (.3), with the remainder being phrases (.4) and words (.4).

Although these numbers may mean more to linguists than to the general reader, the important information in Table 3-10 is highlighted below:

- The average paper is rather perfunctory, linking subjects, verbs and objects without much modification or elaboration.

- There have been some increases in measures of syntactic ability from 1970 to 1979, indicating that 9-year-olds are embedding slightly more information in their sentences than they used to.

An extensive report on the full syntactic analysis of these papers will appear at a later date.

3. Mechanics

As this report illustrates, the consultants who helped develop the national writing assessments do not believe mechanics and error counts are the only or the most important aspects of writing that should be evaluated. Errors may be indicators of unlearned skills, but they may also be indicators of growth. By themselves, errors do not tell us much; in the context of a particular paper, a particular pattern and a particular student, they have great diagnostic value. When we gather error counts from hundreds of papers and organize them abstractly into tables such as those in this chapter, we are using them in a purely descriptive way. We are less interested in the counts *per se* than in the patterns they suggest and the changes they undergo over the years.

Table 3-11 presents mean error counts for two narrative tasks (the "Kangaroo" and "Fireflies" papers discussed earlier). The main point that can be observed from these tables is that really very little has changed from 1970 to 1979. However, it appears that the error counts increased between the first and second assessments, then decreased between the second and third. Looking at each type of error across the nine years, it appears that increased fragments in the "Fireflies" exercise were countered by decreased run-ons and word-choice errors. A decline in the percentage of awkward sentences appeared for the "Kangaroo" papers.

A second point is that one out of every four or five sentences was judged awkward. When these sentences were further analyzed for the "Fireflies" narrative, it appeared that most of them were a result of carelessness—leaving a word out, and so on.

A third point is that the error counts seemed quite consistent across tasks, which is to be expected, considering both exercises required narratives. Looking at the 1979 figures, one sees that in both, the average percentage of fragments is 6-7%, the percentage of run-on sentences is around 14%, the percentage of misspelled words is 9-11%, the percentage of sentences with agreement errors is 8-9% and the number of punctuation errors is between one and two. The punctuation error was slightly more likely to be a comma error than an endmark error, probably of omission. Both sets of papers were relatively free of cap-

TABLE 3-11. Average Frequency and Changes in Average Frequency of Errors in Two Narrative Papers, Age 9, 1970, 1974, 1979†

	1970		1974		1979		Change 1970-74		Change 1974-79		Change 1970-79	
	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %
						"Fireflies"						
Sentence fragments	0.2	3.6	0.3	4.7	0.3	6.1	0.1*	1.1	0.0	1.4	0.1*	2.5*
Run-on sentences	0.4	14.3	0.5	17.4	0.4	13.8	0.2*	3.0	-0.2*	-3.7	0.0	-0.6
Awkward sentences	0.9	27.1	1.1	30.0	0.8	27.9	0.2*	2.8	-0.3*	-2.1	-0.1	0.7
Faulty parallelism	0.1	3.7	0.1	3.8	0.1	3.7	-0.0	0.1	-0.0	-0.1	-0.0	-0.0
Unclear pronoun reference	0.1	1.5	0.1	2.6	0.0	0.9	0.1*	1.1	-0.1*	-1.7*	-0.0	-0.6
Illogical constructions	0.1	2.3	0.1	2.6	0.0	0.6	0.0	0.4	-0.1*	-2.0*	-0.1*	-1.6*
Other dysfunctional constructions	0.6	19.7	0.8	21.0	0.7	22.7	0.2*	1.3	-0.1	1.7	0.1	2.9
Capitalization errors	0.3	--	0.7	--	0.5	--	0.4*	--	-0.2	--	0.2*	--
Misspelled words	3.7	10.2	5.0	10.5	4.3	10.8	1.3*	0.3	-0.7*	0.3	0.6	0.6
Word-choice errors	0.4	1.1	0.5	1.0	0.4	0.8	0.2*	-0.1	-0.2*	-0.2	-0.0	-0.3*
Sentences with agreement errors	0.2	6.0	0.3	7.1	0.2	8.4	0.1	1.1	-0.1	1.3	0.0	2.4
Total punctuation errors	1.8	--	2.7	--	1.9	--	0.9*	--	-0.7*	--	0.2	--
Comma errors	0.7	--	0.9	--	0.7	--	0.3*	--	-0.2	--	0.0	--
Endmark errors	0.4	16.5	0.5	15.9	0.4	14.1	0.1	-0.6	-0.1	-1.9	-0.0	-2.5
Number of respondents	556		584		596							
						"Kangaroo"						
Sentence fragments	0.3	6.9	0.3	5.9	0.4	7.0	0.1	-1.0	0.0	1.0	0.1	0.1
Run-on sentences	0.4	14.3	0.5	18.5	0.5	14.6	0.1*	4.2	-0.0	-3.9	0.1	0.3
Awkward sentences	0.7	24.5	0.8	19.7	0.7	18.7	0.1	-4.8	-0.1	-1.0	-0.0	-5.8*
Capitalization errors	0.6	--	0.8	--	0.7	--	0.2	--	-0.1	--	0.1	--
Misspelled words	3.5	8.6	4.2	8.6	4.3	9.0	0.7*	-0.1	0.1	0.4	0.8*	0.4
Word-choice errors	0.4	0.9	0.5	1.1	0.4	0.8	0.1	0.2	-0.1	-0.2	-0.0	-0.1
Sentences with agreement errors	0.4	12.0	0.5	13.7	0.4	9.2	0.1	1.7	-0.1	-4.5*	-0.0	-2.8
Total punctuation errors	0.9	--	1.3	--	1.2	--	0.4	--	-0.1	--	0.3*	--
Comma errors	0.4	--	0.4	--	0.6	--	-0.0	--	0.2	--	0.1	--
Endmark errors	0.4	13.9	0.6	15.8	0.4	14.5	0.3*	1.9	-0.2	-1.3	0.1	0.6
Number of respondents	384		409		494							

Statistically significant at the .05 level.
†Figures may not total due to rounding error.

italization errors and word-choice errors. However, the "Fireflies" papers contained a greater percentage of awkward constructions—28% compared with 19% for the "Kangaroo" papers.

Since the numbers in Table 3-11 are averages and no single paper could be expected to contain those exact features, Table 3-12 offers another view of errors by presenting the values of their distributions at the first quartile (25% made this many or fewer errors and 75% made this many errors or more), the median (half made this many or fewer errors and half made this many errors or more), the third quartile (75% made this many or fewer errors and 25% made this many errors or more) and the 90th percentile (the most error-prone 10% of the students made at least this many errors). Notice that with the exception of three or four misspelled words and an awkward construction (probably due to carelessness), 50% of the students wrote largely error-free papers. However, it appears that about 25% of the students did commit some errors in almost every category, and 10% displayed severe writing problems. Writing skills—at least in terms of error counts—do not seem to distribute themselves smoothly over a "bell shaped" curve. Rather, they are distributed in heavily skewed shapes that suggest two very different populations of people. One of those populations—the majority—appears to have a general, though imperfect, grasp of written language. The other population appears to be virtually lost.

Tables D-1 and D-2 in Appendix D display error counts for good and poor writers (defined by holistic, primary trait and cohesion ratings). Poor writers created many more fragments, awkward sentences, misspelled words and agreement errors than did good writers. Except for fragments, poor writers do not seem to have many more problems with punctuation than good writers. It does appear that while poor writers may have the tendency to end sentences prematurely (fragments), good writers tend not to end them soon enough (run-ons). Although several specific features changed for one task or the other (poor writers may be making more spelling errors while good writers are making fewer), error rates have remained generally stable between 1970 and 1979 for both good and poor writers.

Table D-3 shows error counts for males, females, blacks and whites. Males tended to make more mechanical errors in most categories than did females. Little seems to have changed from 1970 to 1979 concerning this difference. Blacks, too, made more errors than the rest of the national population. The differences were largest in the areas of awkward constructions and agreement errors, which may be a sign of bidialectal interference in their writing.

Looking back over the tables containing the mechanics results, the major point they seem to make is that the numbers have generally remained stable through the 1970s. This suggests that perhaps a certain percentage of error will always remain as a stable feature of writing, and especially first-draft writing.

C. Attitudes Toward Writing

In 1979, 9-year-olds were asked to respond to a series of statements about themselves as writers. Table 3-13 displays the statements and the percentages of students expressing degrees of agreement or disagreement. In general, statements reflecting positive attitudes toward writing received the assent of half to two-thirds of the 9-year-olds. Statements reflecting negative attitudes were agreed to (strongly or otherwise) by about a fifth to a fourth of the students. Fully two-thirds said they enjoy writing and write for other reasons besides school. And a like proportion indicated they had positive attitudes on at least half the statements. These results indicate that at this early age there is a reservoir of goodwill toward writing ready to be tapped. But they also indicate that even at age 9 there is a hard core of 20-25% who are fearful about writing, have a sense of doom about it and avoid the activity whenever they can. The evidence in the other two volumes of this report suggest that this group of unconfident and pessimistic writers does not go away at the higher ages. If anything, it only hardens and grows somewhat larger. We do not know whether the 17-year-olds who express negative attitudes would also have done so at ages 13 and 9 or whether the pool of unconfident writers changes as some move out and others fall in. The best guess is that some people move in and out of the hard core and many

TABLE 3-12. Means and Percentiles for Errors in Two Narrative Papers, Age 9, 1970, 1974, 1979†

	1970					1974					1979					Mean Change 1970-79
	Mean	Q1	Median	Q3	90th	Mean	Q1	Median	Q3	90th	Mean	Q1	Median	Q3	90th	
									"Fireflies"							
% sentence fragments	4	0	0	0	17	5	0	0	0	20	6	0	0	0	29	2.5*
% run-on sentences	14	0	0	14	50	17	0	0	25	100	14	0	0	17	52	-0.6
% awkward sentences	27	0	20	50	100	30	0	25	50	100	28	0	20	50	100	0.7
# capitalization errors	0	0	0	0	1	1	0	0	1	2	1	0	0	1	2	0.2*
% misspelled words	10	4	7	14	22	10	4	8	14	23	11	3	8	14	24	0.6
% word-choice errors	1	0	0	1	4	1	0	0	2	4	1	0	0	1	3	-0.3*
% sentences with agreement errors	6	0	0	0	33	7	0	0	0	33	8	0	0	0	50	2.4
# total punctuation errors	2	0	1	2	4	3	0	1	3	7	2	0	1	3	6	0.2
Number of respondents			556					504					596			
									"Kangaroo"							
% sentence fragments	7	0	0	0	33	6	0	0	0	25	7	0	0	0	25	0.1
% run-on sentences	14	0	0	19	50	18	0	0	25	100	15	0	0	25	50	0.3
% awkward sentences	24	0	12	40	100	20	0	0	33	67	19	0	0	33	50	-5.8*
# capitalization errors	1	0	0	1	2	1	0	0	1	2	1	0	0	1	2	0.1
% misspelled words	9	3	7	13	19	9	2	6	12	19	9	3	6	13	20	0.4
% word-choice errors	1	0	0	1	3	1	0	0	1	4	1	0	0	1	2	-0.1
% sentences with agreement errors	12	0	0	14	50	14	0	0	17	50	9	0	0	13	33	-2.8
# total punctuation errors	1	0	0	1	2	1	0	1	1	3	1	0	1	2	3	0.3*
Number of respondents			384					409					493			

Statistically significant at the .05 level.
†Figures for means and percentiles have been rounded to the nearest whole number.

TABLE 3-13. National Percentages of Responses to Attitude Questions About Writing, Age 9, 1979

On this and on the next page are statements about writing. There are no right or wrong answers to these statements. Please indicate how much you agree or disagree with each statement by filling in the oval under the appropriate response. While some of the statements may seem repetitious, take your time and try to be as honest as possible.

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
A.	I like to write down my ideas.	20.4	41.1	14.0	16.3	7.9
		61.5			24.2	
B.	I am no good at writing.	11.9	15.2	15.7	28.7	27.8
		27.1			56.5	
C.	Expressing ideas through writing seems to be a waste of time.	11.4	13.6	16.3	29.4	28.0
		25.0			57.4	
D.	People seem to enjoy what I write.	16.5	28.7	29.0	14.0	10.8
		45.2			24.8	
E.	I expect to do poorly in composition classes before I take them.	9.9	12.1	20.7	26.3	30.3
		21.9			56.6	
F.	I look forward to writing down my ideas.	26.2	29.8	15.7	14.2	13.6
		56.1			27.8	

TABLE 3-13 *(Continued)*. National Percentages of Responses to Attitude Questions About Writing, Age 9, 1979~

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
G.	I write for other reasons besides school.	32.7	36.0	12.3	10.1	8.4
		68.7			18.5	
H.	When I hand in a composition, I know I'm going to do poorly.	7.5	10.5	26.2	28.5	25.9
		18.0			54.3	
I.	I enjoy writing.	33.8	31.9	9.6	10.5	12.4
		65.7			22.9	
J.	I am afraid of writing essays when I know they will be evaluated.	9.3	14.9	37.4	20.1	17.1
		24.3			37.2	
K.	I feel confident in my ability to clearly express my ideas in writing.	24.4	31.2	23.2	11.7	8.7
		55.6			20.3	
L.	I avoid writing.	9.3	10.6	12.8	24.2	42.6
		19.9			66.8	

~*Percentages may not add to 100% due to nonresponse. Also, percentages for strongly agree and agree or disagree and strongly disagree may not add to total agreement or disagreement due to rounding.*

Percentage of Respondents Giving a Positive Response to 12 Attitude Questions

At least 1	99.6%	At least 7	55.2%
At least 2	98.3	At least 8	41.6
At least 3	95.2	At least 9	28.1
At least 4	89.3	At least 10	16.3
At least 5	80.2	At least 11	7.4
At least 6	68.6	All 12	1.7

Adapted from a questionnaire, "How I Feel About Writing," developed by Richard M. Bossone and Lynn Quitman Troyka, The City University of New York.

remain in it throughout their school careers. If this is true, then it appears that the inculcation of positive attitudes toward writing must begin prior to the third grade.

CHAPTER 4

AN OVERVIEW OF THE WRITING OF 9-YEAR-OLDS, 13-YEAR-OLDS AND 17-YEAR-OLDS

This volume presents writing assessment results for a single age group; parallel results for the other two age groups appear in the other two volumes of the report. However, in order to put the results in this volume into perspective, it is useful to look at general results for all three ages.

On holistic ratings, the 17-year-olds do not show a statistically significant change over the decade for a descriptive task. There are some signs, however, that the average quality of their writing is somewhat lower than it was. The 13-year-olds display a significant decline in descriptive writing, though it appears that much of it took place between the first two assessments and the quality has stayed about the same since then. The 9-year-olds do not show a statistically significant change on a narrative task, but there are indications that the overall quality of their work has improved with each assessment. These holistic results suggest two things. First, since changes in overall writing quality are basically undramatic for any particular age group, realizing changes in such a complex skill may be a slow process. It may take many more assessments to establish the impact of educational instruction on writing performance. Second, what one says about the situation of writing in America depends upon which level of the educational system one is interested in. The differing trends in the data suggest that primary school, junior high school and high school constitute somewhat separate targets for policy action in the area of writing. Generalizations from one age to another appear to be inappropriate.

The results for writing tasks calling for different types of rhetorical or communicative approaches provide further cause for caution in making global comments about writing. At ages 17 and 13, expressive writing skills are improving or remaining at the same level, while persuasive and descriptive writing skills appear to be declining. At age 9, there have been ups and downs in expressive writing, depending on the task, but persuasive writing skills appear stable.

Error analysis does not reveal many major changes in the commission of certain errors over a decade's time at any age. Awkwardness seems to fluctuate a bit from assessment to assessment, as do punctuation and spelling errors. But the range of fluctuation seems small and the data suggest that at each age there will always be errors in writing of this kind. Even more stable than the error proportions are the results of syntactic analysis. The embedding rates and various indices of subordination and coordination remained identical or very similar at ages 13 and 17 from assessment to assessment. This is largely so at age 9, but some indicators do reflect a bit of growth over the decade.

Although all three age groups did not perform the same writing tasks, it is clear that more 13-year-olds demonstrated writing skill than 9-year-olds and more 17-year-olds did than 13-year-olds. There is progress from age to age and from grade to grade.

On the other hand, enjoyment of writing seems to decline from age to age. Two-thirds of the 9-year-olds said they enjoy writing, compared to 59% of the 13-year-olds and 53% of the 17-year-olds.

Group results and changes in them were quite consistent across the three ages. Females wrote more good papers than males in all assessments at each age and for all but one task. The male/female difference did not change appreciably for any age group.

Black youngsters improved either absolutely or relatively on almost all writing tasks given to 13- and 17-year-olds and one task given to 9-year-olds. In some cases this meant that they continued to perform below the national level, but not as far below as they had been in 1969 or 1970; in other cases, this meant that they performed at the national level after once having been below it.

At age 17, the disadvantaged-urban group made steady gains over the decade. At age 13, the group stayed below the national level or fell even farther behind. Nine-year-olds in the disadvantaged-urban group closed the gap between themselves and the nation on one expressive writing task but remained at a constant level below the nation on the rest.

At all three ages, it appears that a considerable proportion of young people—from 10 to 25%—do not understand the nature and conventions of written language. In an earlier NAEP report, *Writing Mechanics, 1969-74* (1975), we noted that the gap between the writing "haves" and the "have nots" seemed to be widening. The more comprehensive data available now do not indicate that the gap is widening. They do indicate, however, that it has not closed appreciably at any age.

Finally, it is clear from the background questions that neither 13-year-olds nor 17-year-olds receive a great deal of direct instruction in writing or are required to do much writing in school. Very few appear to have access to a writing program that includes prewriting instruction, oral and written feedback on writing assignments, encouragement to write several drafts of papers and opportunities to rework papers after they have been reviewed by teachers.

CHAPTER 5

SOME OBSERVATIONS ABOUT WRITING IN AMERICA, THE ASSESSMENT RESULTS AND THE IMPLICATIONS OF THE RESULTS FOR INSTRUCTION

In order to put the assessment findings into perspective and stimulate discussion of the issues they raise, the National Assessment invited five nationally prominent individuals to discuss and interpret the data. Participating in two days of lively conversation about the subject were:

V. Jon Bentz, Director of Psychological Research and Services, National Personnel Department, Sears, Roebuck and Company, Chicago, Illinois. In addition to his interest in writing and assessment from a corporate point of view, Mr. Bentz has been a member of two boards of education and the Policy Committee of the National Assessment of Educational Progress.

Beverly Bimes, English teacher, Hazelwood Schools, Missouri. Ms. Bimes is a Title I consultant, Gateway Writing Project consultant, Presidential Scholar Commissioner and 1980 National Teacher of the Year.

Charlotte Brooks, writing teacher, author, editor, education consultant and past President of the National Council of Teachers of English.

John Mellon, linguist, author and Chairman of the Program in English Composition. University of Illinois at Chicago Circle.

Richard Lloyd-Jones, Chairman, Department of English, University of Iowa; past President of the Conference on College Communication and Composition; Chair, Modern Languages Association Division on the Teaching of Writing; and Associate Director, Iowa-National Endowment for the Humanities Institute on Writing.

All present felt it was important for readers of this report to understand the National Assessment data and the social and educational contexts within which writing instruction takes place before rushing to conclusions about what these results might mean. After establishing this contextual framework, the panel discussed at length the significance of the trends and their implications for teachers of writing. Their opinions are theirs alone and do not necessarily represent either the views of the institutions with which they are affiliated or those of the National Assessment of Educational Progress, the Education Commission of the States or the National Institute of Education.

Assessment Data in Perspective

All participants wished to emphasize the fact that the writing upon which this report is based was first-draft writing gathered under timed assessment conditions. Such writing is likely to understate youngsters' abilities to develop fully their ideas and smooth out their writing through subsequent drafts.

In addition, some of the assignments are necessarily artificial and may understate the writers' capacities to do a better job in a "real world" or school situation when real stakes are involved.

John Mellon stressed the point that NAEP data are descriptive, not normative. "It's easy to think something's wrong when performance is down," he said, "but it's not necessarily the case. It's really hard to tell what these ups and downs mean

until we've got 50 years of them. Then, maybe we'll see that they smooth out to a relatively straight line. In the meantime, I prefer to view the results as descriptions of something complex and, except in extreme cases—or instances when we have other kinds of data to bring to bear—withhold judgment until we have a better idea of what we can reasonably expect the results should be in a society like ours."

Richard Lloyd-Jones speculated about what kinds of changes would most likely affect national indicators such as these data: "Crises in the society as a whole may show up in a sample of writing quickly because they may affect the incentives students feel to perform well in these circumstances. Long-term changes in society may show up less quickly and dramatically in data of this kind. Changes caused by classroom practices would show up slowly, if at all, because the teachers remain essentially the same, the time devoted (or not devoted) to writing remains relatively stable and instructional materials remain much the same for long periods of time. By and large, the most likely causes of changes in assessment data will be large social movements that affect large subgroups of people—such as integration, for instance—rather than curricular or instructional movements, which tend to cancel each other out across the nation as a whole."

The Social Context of Writing

Like many commentators upon contemporary education, the participants in this discussion stressed the degree to which sociocultural factors can influence achievement in a subject, such as writing. People perfect their language skills in oral practice, mostly outside of school. Because writing is derived from that base, it tends to reflect whatever is part of general public practice. In addition, if the culture at large seems to accord little importance to writing or to writing well; if professional writing is not generally held in high esteem; or if social upheavals affect opportunities to learn, practice or value any of the many skills involved in writing, then we should not be surprised if achievement appears, sometimes, lower than we think it should be.

Jon Bentz believes that society has been valuing writing less and less in the last two decades. "Everything is computerized, quantified, visual or audio," he said. "Respect for, or even interest in, the written word is on the decline. And the art of conversation, of interchanging thoughts, appears to be passing, or at least changing in character. In our McLuhanesque world, fewer people reason, while more make demands and pronouncements. Television, primarily a passive experience, reduces the need for imagination and interaction, both of which are critical for good writing."

In response to the declines in the proportion of youngsters demonstrating effective persuasive writing, Lloyd-Jones speculated that we might be witnessing a consequence of the "Me" generation. "Persuasive writing requires a highly developed social sense," he said, "an ability to imagine other peoples' needs and priorities in order to address them. Perhaps we're seeing a decline in the proportions of youngsters able to imagine other people or experiences outside of a very narrow range of self interests."

Beverly Times added the observation that "if the social experience of argument is weak or shabby, it's hard to see how our students could learn good argument or persuasion."

All agreed that writing is a complex and difficult skill, requiring considerable motivation to learn and numerous good models to learn well. Social changes that affect motivation or the availability of models will affect the number of young people who learn to write well.

Mellon mixed some advice about society's expectations with a speculation about the slight decline in overall quality at age 17 and the larger decline at age 13. "It may be that, as Piaget remarked, Americans are too concerned with the speed at which their children develop," he said. "Perhaps we're seeing a slight slowing down of what we used to think of as the 'normal' developmental schedule. The skills will come eventually, but they're coming a little slower than they used to, that's all. A complex social change could conceivably delay the cognitive or emotional development of a particular generation in some respects, while speeding it up in other respects."

The Educational Context of Writing

The discussants were in general agreement that a number of the characteristics of American mass education and a number of educational trends combine to constitute a less-than-ideal environment for the teaching and learning of writing. Among the features of our educational system that make effective writing instruction difficult, they cited these as prominent:

- Writing requires considerable one-to-one teacher/student and student/student interaction, while our system is geared to instructing large groups. Furthermore, class size continues to grow, not shrink, making individual attention nearly impossible.

- Writing instruction is considered to be the responsibility only of English teachers. Thus, an activity that should pervade instruction in all subjects is relegated to a small part of a student's day and severed from general learning. Furthermore, many teachers deprive students of writing opportunities by giving multiple-choice and short-answer tests and shying away from essays.

- Many people teaching English were trained in other subject areas and know little or nothing about writing.

- Too many people trained to teach English still have had little or no training in composition or writing.

- Many English teachers see themselves as literature teachers, not writing teachers. When they do teach writing, they tend to focus upon the products of writing, rather than the process.

- Writing requires practice, but most teachers feel they do not have the time to read and critique all the papers that would be written if their students were practicing as they should be. Consequently, less writing is assigned than should be.

In addition to these general problems, which have a long history, the discussants also cited several more recent trends in education that do not auger well for writing instruction. Charlotte Brooks criticized a "lock-step" approach to learning that has become increasingly popular with the minimal competency movement and tighter education budgets. "Writing is not something a child can learn a little piece at a time," she said. "So many of these competency programs break reading and writing up into bits: first, you master the alphabet, then you master words, then you can go on to sentences, and so on. The child seldom gets to see the larger picture, seldom gets the freedom to explore with language and take risks."

Bimes said, "I think the basics movement has been detrimental in many ways to writing. Too often, what's basic turns out to be mechanics and grammar, not writing. And expressive writing, which *is* basic, is seen as a frill. We have to remember that a writer has feelings and a writer has a mind. To deny either of those is to deny a student the possibility of becoming a writer at all."

Bentz saw budgetary cutbacks as more threatening to writing than to other subjects. "The cutbacks in my state generally mean the schools lose the paraprofessionals and readers who help writing teachers with their paper load," he said. "They also cut into the conference time teachers need with their students."

All agreed that publishers represent a conservative force in the teaching of writing. It is very difficult to get publishers to incorporate new ideas into their writing textbooks, they argued, because the publishers are afraid to take economic risks in today's tight market. Consequently, major textbooks have not changed for decades, in spite of a virtual explosion of useful research and practical information in the field of writing.

"I think we should remember that a lot of very positive things have been happening in the schools since the late 60s," Brooks reminded the group. "It hasn't been a totally negative period for writing. We've had the Right to Read program, and where it has been done well, it has helped writing, too. I don't like to separate reading and writing, because they feed each other. And we've had the Poets in the Schools Program and the various humanities programs that expose stu-

dents to writers and scholars. These have been very successful where they've been used. And some schools have begun to follow the example of England with Writing Across the Curriculum programs. I've seen these work in England and they're tremendously impressive."

"We've seen writing labs, too," Bimes added. "And a mushrooming of programs modeled after the Bay Area Writing Project. It may be that these developments are too recent to affect the 1979 writing assessment, but we might see some impact in the next assessment, if they continue to spread and escape cutbacks."

Comments About the National Results

The discussants were asked whether they thought the percentages of competent papers for each exercise and at each age were lower than they would like, higher or about what they might have expected. In general, they felt that the achievement levels were satisfactory, given the social and educational environments of writing in the last decade. They were, however, disappointed with the results for the persuasive writing, especially at ages 13 and 17. And, as might be expected, they felt there was some room for improvement on every exercise.

Lloyd-Jones pointed out that in the papers written for each assessment, there were "some astonishing papers—any reader would be pleased and challenged by them. Even though they write under restraints of limited time, artificial tasks and no external reward," he said, "some writers far exceeded any reasonable expectation."

Most writers, the group felt, produced "reasonably adequate first drafts for their age." The average paper needs revision, they pointed out, and it falls short of effective or powerful writing; but it represents material a teacher ought to be able to help students refine to a perfectly acceptable level. The potential of the majority of writers is obvious.

However, the group was strongly disappointed by the consistent reminders in the data that 10 to 25, and sometimes 30%, of the youngsters at each age have extremely serious problems with writing that call for special attention. Although Lloyd-Jones estimated that half of the students in that group are probably there for reasons other than lack of competence (e.g., physical, psychological and social problems), everyone still felt the proportion of such youngstes is unacceptably high. "It's hard to imagine that one of a child's first instincts is to want to write," Bimes said. "In fact, children attempt to write before they even think about reading. What have we done to this natural desire in our children?"

What did the group think about the trends? No one believed the NAEP data support fears of a massive erosion of writing competence. They all observed that the holistic-scores decline at age 17 was slight—worth keeping an eye on but not sufficient to provoke great concern. They would have preferred to see an increase. They felt the age 13 decline was more dramatic, but they pointed out that most of it occurred between the first two assessments and things seem to have settled down since then. They were gratified to see improvement among the 9-year-olds and expressed hope that this would bode well for the future.

Bimes expressed concern about the low percentage of 17-year-olds who attempted to write a humorous paper. "It appears that students aren't given opportunities to use higher-level cognitive skills in their writing," she said. "Too many writing assignments simply become a way for students to regurgitate information instead of requiring them to generalize, analyze, synthesize, hypothesize or defend."

Comments About the Group Results

Brooks spoke for the entire group in saying, "I am enormously encouraged by the consistent growth demonstrated by black and urban-disadvantaged writers on most exercises. At all levels, it's clear that something has happened to help these youngsters write better. Although many of them have not yet reached a high level of writing competence, they obviously have a potential for improvement that educators, legislators and the public at large must recognize. There is competence where once people said there was none."

It was this improvement, coupled with the improvement of the Southeastern region on many exercises, that led the group to speculate that the assessment results may reflect the impact of a change in the national pattern of attention paid to minority youngsters over the last decade and a half. "Something of that magnitude could well affect large groups such as the blacks, the urban-disadvantaged and the Southeastern youngsters," said Lloyd-Jones. Brooks agreed, noting that "there is no economic improvement in the inner city that I know of that could account for such an improvement."

Some Implications of the Results for Teaching

Responses to the background questions demonstrated to the group that too little writing is going on in the schools and too few students are being exposed to a comprehensive writing program. The fact that so few students appear to receive instruction in prewriting, oral and written feedback from teachers and encouragement to improve papers after they're handed back indicates, they said, that there is much work to be done in the schools.

"I think the results show a clear need for more writing laboratories in the schools," Bimes said. "But they also show a great need for professional development. Teachers need first to see themselves as professionals and then to participate more widely in the various workshops and inservice programs in writing that have begun to appear in the last five years. There's a lot of information out there that's just not reaching the teachers."

"Writing labs, yes," Brooks added, "but not remedial writing courses. I think 'remedial' courses that fragment language have not helped in reading and I'd hate to see us make the same mistake in writing. Too many remedial writing courses just teach grammar and don't give youngsters opportunities to work with whole pieces of writing."

"I'd like to see more emphasis placed on persuasive writing," Bentz said. "To me, that's critical to success outside of school." Brooks agreed: "I'd like to see not only more attention to persuasion, but more attention to complex thinking skills in general. In reading, I'd like to see more emphasis on inference and comprehension, because I think that would improve both reading and writing. They don't need to be taught separately and taught a piece at a time."

Speaking about the grammatical structures used by writers at the three ages, Mellon observed, "The amazing stability of the syntax counts over the 10-year period suggests that grammatical maturity is not affected by those cultural factors influencing other aspects of students' writing. It also means that there is no need to step up the amount of grammar teaching aimed at maturity of grammatical structures."

"The greater length of the 9-year-olds' essays shows a greater willingness to write," Mellon also remarked. "That's encouraging and we should take advantage of it."

"Writing begins with enjoyment," Bimes said. "Until we teach children to enjoy writing we're not going to make the improvements we could otherwise."

"We have a base to build on," Brooks pointed out, "the results show that. The raw material is certainly there, the skills are there for most youngsters. We can no longer assume that any group of kids is 'unteachable.'"

The group made a number of suggestions about classroom approaches that would help more youngsters learn to write. Among them were these:

- Get the 9-year-olds "hooked" on writing by assigning writing suitable to their age and interests. Help them build security and interest through expressive writing and then lead them toward more difficult modes gradually. Let them experience success.
- Build on the fact that all youngsters have a solid grasp of oral language. Use that base as a springboard for writing instruction.
- Have them write. No one can achieve success in a skill that is seldom practiced.

- Structure assignments so that writing becomes discovery instead of regurgitation.
- Establish places where students write freely and receive constructive feedback on what they write.
- Since 13-year-olds appear to have difficulty with abstraction, start them on concrete expression and then move them gradually toward generalizations until they are skilled at making generalizations supported with concrete details.
- Develop persuasive writing skills by developing a sense of audience. Have them practice writing for different audiences.
- Teach skills useful at each stage of the writing process: prewriting, composing and editing.
- Integrate writing into all activities—science, social studies, even mathematics. Writing is an important and very effective way of learning.

APPENDIX A

EXERCISES, DOCUMENTATION, SCORING GUIDES AND SAMPLE PAPERS

Appendix A contains exercises and information about them, such as the NAEP objectives they are designed to assess, the kinds of scoring National Assessment utilized with each one, the amount of time students were given to respond and the number of lines students had on which to write. Following each exercise are any scoring guides used for evaluating the responses, and following the guides are sample papers illustrating each score point.

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"Kangaroo" Exercise

Here is a picture of a kangaroo in Australia. Look at the picture for a while. What do you think is happening? Where do you suppose the kangaroo came from? Where do you think he is going? Look how high he jumps! Why do you suppose he is jumping over the fence?

Write a story about what is happening in the picture.

WRITING TASK: Kangaroo

NAEP #: 0-102013-13A-1

RHETORICAL MODE: Expressive - Narrative

OBJECTIVE: I. Demonstrates ability in writing to reveal personal feelings and ideas.

SUBOBJECTIVE: B. Through the use of conventional modes of discourse

NAEP SCORING: Holistic
Paragraph Coherence
Syntax (Sentence Types) and Mechanics (see Appendix B)

AGE: 9

TOTAL TIME IN SECONDS: 933

NUMBER OF LINES: p.1 - 13
p.2 - 24

HOLISTIC SCORING GUIDE
"KANGAROO"
AGE 9

Score Point Categories:

Score of 4

These writers will enter into the picture imaginatively using such devices as dialogue and character names. There will be clear structure and a sense of drama, which will answer the "what" and "why" of the question. The "where" may or may not be described, but the paper will have a sense of substance. The writing will usually have some spelling and sentence construction errors but will show a clear sense of English syntax.

Score of 3

These papers will leave out parts of the picture, such as the fence or the jump, and will have less completeness or drama than the 4 paper. They may give commentary or explanation rather than a story. They will have substance, some sense of drama, and some imagination, and they will deal with the "what" and the "why" of the question. The writing need not have much subordination or syntactic fluency, but it will not be so filled with errors as to be difficult to read.

Score of 2

The 2 papers have some sense of narration and situation; however, the story will be fragmented or incomplete, the writing will be vague, and there will be little use of the imagination. The 2 papers may ignore the picture but use the situation. They will be very brief, studded with errors, and may contain only a single complete sentence or a series of speculations about the picture.

Score of 1

The papers scored as a 1 may be minimal attempts, sometimes only a phrase. The papers may be unfathomable because of errors. There may be no sense of narrative and, thus, only a series of unconnected statements.

Score of 0

No-response papers should be given to the Table Leader for scoring.

PARAGRAPH COHERENCE SCORING GUIDE
(Developed for the 1973-74 Writing Assessment)
"KANGAROO"

Paragraph Level Scores

1. Paragraph Used -- The paragraph is visually discernible but is neither coherent nor developed. The writer indented, skipped a line, or stopped in the middle of the line and started back at the margin.

2. Paragraph Coherent -- The sentences are linked using transitions and/or other cohesive devices. The ideas are ordered and their relationship to each other is clear but the paragraph is in some sense underdeveloped. This category also includes paragraphs that are overdeveloped; that is, the writer incorporated at least two coherent paragraphs into one.

3. Paragraph Coherent and Developed -- The paragraph has an expressed or an implied topic which identifies and limits the main area of concern. Every sentence in the paragraph adds to or explains something about the main topic in a systematic manner.

NOTE: Papers that are illegible, copies of the stem, or lists of spelling words are designated as such and receive no further scoring.

SAMPLES

Holistic

Score Point 1

the kangaroo is imping the fence?
riall high from the fence he saw?
the clouns and it look so little?
the grass he imping riall high even?
nobody can imping that high in life?
yeace jumping like six feet tase cuse?
nobody can jump

* * * * *

He just got some food from the people that live in the little town and the kangaroo juming over the fence to care the food here baby and so they could jumping like them mother to be a kangaroo jumping there mother over the fence getting some food like they mother to get more food

Score Point 2

The Kangaroo jump over the fence to get away from his enemy, and get some food to eat. the kangaroo came out of Pouch and Jumped away for his mother and will Try To get away from his enemy and Cease and get away fast or he will die he wons to Be the last wan to Seareve and Be alive

* * * * *

I think he is runing away from some men who are looking for animals for the zoo. I think he came from the back yard of a hunters yard. He is trying to escape He looks like he is jumping almost 10 feet over the fence in a hunters research lab in Australia

Score Point 3

The kangaroo is running away from some big animal. The animal is a big lion. the lion is out looking for food. The kangaroo is leaping high and running fast. She is going back to her den to hide

* * * * *

Someone is running at him and trying to catch him and he jumped over the gate and he is trying to get away from them because they might to kill him and he will be on coat for them and keep them warm all day and night.

Score Point 4

There once was a kangaroo that lived in Australia. It was a wild animal but it liked people.
The kangaroo was eating its supper All of a suden a leopard jumped on the kangaroo and thought he got him. But the kangaroo was smart and Jumped has high as 20 or 30 feet high over the 15 feet fence.
The leopard could not jump it so he had to go 3 miles to get around it By that time the kangaroo was gone.
The leopard was so mad he bit his tail.

The End.

Father and mother kangaroo liked each other very much. One day they had babies, but a tragic thing happened. Poachers captured father Kangaroo. They had a camp with a 20 feet high fence. They locked the kangaroo in there. Father kangaroo was very homesick. One day he knew he could do it, and he had to. He headed towards the fence. Then he leaped. He soared over the 20 foot fence and went back to his home and lived happily with his family ever after.

"Fireflies" Exercise

Here is a picture of a girl who is having fun in the summer. Look at the picture for a while. What do you think she is doing? What do you think she might do next?

Write a story that tells what the picture is about.

WRITING TASK: Fireflies

NAEP #: 0-102012-13A-1

RHETORICAL MODE: Expressive - Narrative

OBJECTIVE: I. Demonstrates ability in writing to reveal personal feelings and ideas.

SUBOBJECTIVE: B. Through the use of conventional modes of discourse

NAEP SCORING: Primary Trait: Imaginative explanation by means of narrative.

Cohesion

Syntax (T-unit Analysis and Sentence Types) and Mechanics (see Appendix B)

AGE: 9

TOTAL TIME IN SECONDS: 921

NUMBER OF LINES: p.1 - 15
p.2 - 24

NOTE: The picture used in the assessment was in color.

TRAIT SCORING GUIDE
"FIREFLIES"

Rhetorical Mode: Expressive - Narrative

Primary Trait: Imaginative explanation by means of narrative invention.

Rationale of Primary Trait: This exercise presents two challenges to the writer. The first, introduced with the question, "What do you think she is doing?" asks the writer to explain. The second question, "What do you think she might do next?" introduces the problem of time and fiction which is confirmed by the directive, "Write a story." The two directives, then, require respondents to use the conventions and techniques of storytelling as a framework for inventing explanations of "what the picture is about."

General Scoring Rationale: Essentially readers should concentrate on whether the response only offers direct answers to the questions or whether it goes on to tell a story. Writers who only offer direct answers to the question(s) are scored "1" or "2"; those who go on to write a story reach the "3" or "4" level. A detailed, concrete description will earn a "2" while a less attractive, generalized narrative might earn a "3". The best papers tell a fully controlled and detailed story.

Some elements of the exercise are not relevant to the writing. Many children do not know what fireflies are. Readers must ignore the literal fact and accept the writer's interpretation when accounting for the actions. In addition, the introduction states that the girl is having fun; however, this thesis is insignificant and its inclusion is not necessary to complete the task.

Scoring Guide Categories:

0 = No response.

1 = Some explanation, but no narrative invention. These responses deal with the explanatory obligation of the task at a minimal level. That is, they answer one or both of the questions with a few bits of information (2 or 3) which tell "what the picture is about."

Scoring Guide Categories (continued):

2 = Moderate to ample explanation, but little or no narrative invention. Essentially, these responses are longer versions of category "1" responses. They explain "what the picture is about" by providing moderate to ample (4 or more) details. They are not set in a story framework although some may include minimal attempts such as giving the girl a name or implying a cause and effect relationship or a time sequence. No matter the number of details or an attempt to get into a storytelling framework, these responses remain little more than discrete or disconnected answers to the questions posed in the stimulus.

3 = Imaginative explanation, by means of narrative invention. These papers invent details and cast them into a framework. They use several storytelling devices such as naming characters, setting scene, temporal or causal linking, dialogue, etc. However, they remain flawed in the sense that the stories are not sustained. For example: 1) they may begin with question answering before moving into storytelling, 2) they may set up a situation but the plot or narrative is only offered in bare outline form (no more than one or two bits of invented information), or 3) they may set up a situation and get into the story but either lapse out of storytelling into question answering or leave it unresolved, hanging in mid-air. In summary, the "3" responses explain the picture through storytelling but do not demonstrate full control.

4 = Imaginative explanation, by means of developed and controlled narrative invention. These responses explain the picture through a fully controlled and detailed story. They set the scene immediately, invent moderate to ample details not provided by the picture, cast the details into a narrative without lapses and provide a conclusion to their story.

7 = Illegible, illiterate.

8 = Misunderstands the task, writes on another topic.

9 = I don't know.

COHESION SCORING GUIDE
(Developed for the 1978-79 Writing Assessment)
"FIREFLIES"

In scoring papers for cohesion, scorers need to be attentive not only to the incidence of cohesive ties but also to their successful ordering. Underlying and further strengthening these ties is syntactic repetition, both within and across sentences. The following example achieves cohesion by lexical cohesion, conjunction, reference, and substitution, and yet these various kinds of cohesion are both emphasized and related among themselves by numerous incidents of syntactic repetition.

> There is a girl who is catching fireflies. She is puttting some into a jar. When she is finished, she will take them into a dark room and watch them glow. After that she will let them go so that they could lay eggs and there will be more fireflies for next year. Then she can catch them again year after year.

When both the incidence and ordering of cohesive ties pattern the entire piece of writing, the writer has created what we ordinarily call coherence.

Scoring Guide Categories

1 = Little or no evidence of cohesion. Basically, clauses and sentences are not connected beyond pairings.

2 = Attempts at cohesion. There is evidence of gathering details but little or no evidence that these details are meaningfully ordered. In other words, very little seems lost if the details were rearranged.

3 = Cohesion. Details are both gathered and ordered. Cohesion is achieved in the ways illustrated briefly in the definition above. Cohesion does not necessarily lead to coherence, to the successful binding of parts so that the sense of the whole discourse is greater than the sense of its parts. In pieces of writing that are cohesive rather than coherent, there are large sections of details which cohere but these sections stand apart as sections.

4 = Coherence. While there may be a sense of sections within the piece of writing, the sheer number and variety of cohesion strategies bind the details and sections into a wholeness. This sense of wholeness can be achieved by a saturation of syntactic repetition throughout the piece (see description above) and/or by closure which retrospectively orders the entire piece and/or by general statements which organize the whole piece.

7 = Illegible, illiterate.

8 = Misunderstands the task, writes on another topic.

9 = I don't know.

NOTE: Scorers should not take mechanics or transcription errors into consideration. Also, the scorers should judge only the interrelatedness of the ideas, NOT the quality of those ideas.

Examples of Cohesive Ties:

In general, "cohesion" refers to the ways clauses and sentences are related to each other and can be thought of as the gathering and ordering of related ideas. If the parts of a discourse cohere, they "stick" or are "bound" together. Cohesion is achieved by ties of considerable variety, and these ties can be both semantic and structural. Additional examples of specific kinds of cohesion ties are identified by Halliday and Hasan in Cohesion in English.

Lexical Re-naming

The girl has a jar to put bugs in. The bugs are called fireflies.

Semantic Conjunction

Additive -
The girl is catching lightning bugs. She is also catching butterflies.

Adversative -
I wanted to help the little girl catch fireflies, but I couldn't find her.

Causal -
This little girl is trying to catch fireflies so she can take them to school.

Temporal -
She is catching lightning bugs and putting them in a jar. Next she will show them to her mother. Later she might let them go.

Pronominal Reference

Personal -
There once was a girl. She liked to catch bugs.

Demonstrative -
She is collecting bugs. This collection is for her science class.

Comparative -
I wish I had some bubbles like hers.

Pro-form Substitution

Nominal -
The lightning bugs are out and the little girl wants to catch some.

Clausal (use of so and not) -
The little girl knows they are fireflies because her mother said so.

Ellipsis

Nominal -
The girl's mother told her to let the bugs go but she wouldn't [ ].

Verbal -
She had to go to her room and couldn't come out until her mother said she could [ ].

Clausal -
She is catching either lightning bugs or butterflies but I don't know which [ ].

Note: While helping plan the 1978-79 writing assessment, National Assessment consultants expressed the opinion that coherence and cohesion deserved special consideration and that a more thorough method of describing information about coherence was needed. In consequence, this cohesion scoring guide was developed and used with the "Fireflies" exercise to replace the paragraph coherence guidelines developed in 1973-74 and used with the "Kangaroo" exercise.

SAMPLES

Primary Trait

Score Point 1

She is picking apples.

The end.

* * * * *

She is blowing golden balls in the summer. She has a jar of golden spray to blow the golden balls out of. She is putting the golden balls back into the bottles.

Score Point 2

Well, she is catching lightningbugs and put them in a jar and then incase the lights go out she will have lights so she could read or something like that or she could keep a hole bunch of them.

* * * * *

Once night a girl went to catch some lightningbugs. She took a jar with her. She caught 19 bugs. She was glad. She wanted more but she had caught all of them.

Score Point 3

This girls name is sindy she's 9 years old. She's catching bee's she likes to catch bee's she collects them and she tries to find the hive. They live in and get on her suit so she wont get stung and then finds the hive to make honey but when she dosn't have here suit on she becomes very carfull not to get stung and in this picture she is picking leaves and flowers for her bee's.

* * * * *

Once upon a time there was a girl named Sally. She went out for a while to pick blue-berrys for her mother. She took a jar and started to pick the berry's. It was a warm day and Sally was happy because she could pick blueberry's for the first time this spring so she started whistling a song that her friend taught her.

Cohesion

Score Point 4

One day a girl went looking for lightby-bugs She caught five of them She was fascinated by the way they lit up. So the next day she went to the library and took out a book about them. She also took notes about them She read they needed air and room to fly around so She let them free.

* * * * *

One day when I looked out of my window I saw small lights flashing. I thought it was an invasion from outer space. I was very scared, so I went outside to see wat it was. I thought was it an invasion? No it wasn't, but I didn't know it, so I decided to try to catch whatever they where. I asked my mom if I could borrow a jar, she said, "Yes." Then I went outside with the jar the lights started to move away so I tried going after them, but they where to fast. "whoosh" my jar flew to catch one, but I missed it. Then I put the jar down, and I tried catching them with my hands "Pow." I missed again finaly one last try, I caugt one! I really did. But it wasn't an invasion, it was only fireflies.

Score Point 1

she is trying to catch a firefly in the summer the girl caught 7 the end

* * * * *

She is catching lighning bugs And She is puting them in a jar.

Score Point 2

She is tring to catch a butterfly and put it in a gar She Mit Be Looking at the sun But I dont NO she Mit Be Best Looking But I Think She is tring to catch a Butterfly and put it in a gar and then she will put grese in it and if it dys she will throw it away or coap it The End.

* * * * *

once a girl was blowing byballs a lot of them she watched them and them. She poped them all.

Score Point 3

One day a girl was thinkinking of something to do in the summer One night she was looking outside and saw some lights. She took a jar and tried to catch one. She caught one and decided to get another. After she got about five she decided to get more. She is holding the jar in one hand and catching a firefly in the other.

* * * * *

She is going to pick a apple from the tree and is going to eat the apple then she is going to play with her friends and ask them if they can come out. Then her mother is going to call her in. Then she will ask her mom why she called her in and her mom will say because we are going out to eat. its your dads birthday. Then they went to eat and they come back and she will go to bed.

Score Point 4

The butterfly fluttered through the trees in the dark of night. A little girl with a jar tried to catch the butterfly. It flew from the little girl's grasp. She thought it was the most beautiful thing she had ever seen. She tried and tried and she finally caught it. She brought it home and showed it to her whole family. The little girl put it on her dresser. She left it there for a long time. Soon the butterfly started to wither away. The little girl knew she did something very cruel. She didn't pay attention to it so she let it go.

The Secret Place

Today in the summer a little girl decided to go catch some insects and examine them. So she got a jar and went outs Then she got some water.

Then she got another jar and got some different kinds of bugs.

Finally she saw a butterfly and it was pretty it would be fun if she could catch it. But it was so pretty she decided to leave it alone and let all the other bugs out of the jar. They should be free she thought.

She was sure she did the right thing. She knew she wouldn't want to be caged up either.

"Goldfish" Exercise

Sometimes it is fun to think about what it would be like to be something besides a person. What would it like to be a goldfish? Or an airplane? Or a horse? Or a tree? Or any other thing?

Think about what you would like to be. Write the name of the thing in the box below. Then write about what it is like to be that thing. Space is provided below and on the next two pages.

WRITING TASK: Goldfish

NAEP #: 0-101006-52A-1

RHETORICAL MODE: Expressive

OBJECTIVE: I. Demonstrates ability in writing to reveal personal feelings and ideas.

SUBOBJECTIVE: A. Through free expression

NAEP SCORING: Primary Trait: Expression of participation in an existence different from self through elaboration of detail.

AGE: 9

TOTAL TIME IN SECONDS: 930

NUMBER OF LINES: p.1 - 9
p.2 - 26
p.3 - 21

BEST AVAILABLE COPY

TRAIT SCORING GUIDE
"GOLDFISH"

Rhetorical Mode: Expressive

Primary Trait: Expression of participation in an existence different from self through elaboration of detail.

Rationale of Primary Trait: The instructions stress "what it is like to be that thing." The quality of a paper is determined by two factors: 1) the extent to which the writer is able to assume another form of existence and 2) the degree of specificity the writer uses to elaborate how it is to exist as that form of being.

General Scoring Rationale: Competence is indicated by the invention and elaboration of consistent detail. Readers should mainly take into account the quantity of detail and whether that detail is particularized to the selected object -- for example, almost any "thing" could be happy, fewer are cute, still fewer are fuzzy, and only cats meow. Better papers will not only express a number of details focused on "the thing" but will elaborate those details in a sustained and consistent fashion. The best papers will be unified by some expressive or logical principle.

Scoring Guide Categories:

0 = No response.

1 = Little or no expression of what the thing is like. These responses offer only a minimal amount of detail. Some may offer a few (up to 3) highly specific details, but the responses are just too sparse to convey anything beyond a limited expression of what the thing is like. Others may offer more (as many as 5) bits of information, but some or all of them are too vague (or even nonsensical) to help particularize the thing the writer wants to be.

2 = Moderate expression of what the thing is like. These responses are moderately detailed. They include 4-5 details which particularize what the thing is like. Yet they either are too brief or possibly include extraneous or vague bits of information so that their expression of what the thing is like remains incomplete or fragmented.

Scoring Guide Categories (continued):

3 = Detailed expression of what the thing is like. These responses may take several possible forms.

a. They may include 6 or more details which particularize what the thing is like. However, details tend to be briefly stated (not elaborated) and only a moderate degree of linkage between the details is present.

b. They may contain only 4-5 details. However, several of these details are elaborated. The information seems to be presented in clusters.

c. They may include 5 details related to each other by means of a narrative or characterization.

In summary, the "3" responses particularize the "thing" but lack elaboration and unification of detail. They may even contain some inconsistent elements.

4 = Consistent and vivid expression of what the thing is like. These responses are highly detailed (6 or more details some of which are elaborated) and are unified by the presence of some kind of expressive or logical principle.

7 = Illegible, illiterate.

8 = Misunderstands the task, writes on another topic.

9 = I don't know.

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SAMPLES

Primary Trait

Score Point 1

horse

I whant to be a horse
Because I whund like to
Be a fast ran and Be a good
horse to.
The
end.

* * * * *

I would like to be a goldfish

I would want to be a goldfish because I like the color orange.

Score Point 2

a tree

it's nice to be a tree because you can live almost forever and when someone chops you down you would be helping others keep warm, and you could have nice ripe apples, peaches, bananas, limes or cherrys and have nice flowers and leaves, if it had to be something else a tree is what id be.

* * * * *

A Race Car

I would probally have to be able to run very fast. Sometimes I'll come in first pit for oil, gas, or any other kind of break. Mostly I'll be worring about my spead, tires, and my body. I would have had to drive around the race track to get use to it and get the feel of it.

Score Point 3

A Horse

You can roam through the hills And you could play as long as you wanted and you could eat as much grass and you could drink all of the water you wanted. You could let people ride you. And You could pull a cart or a wagon with someone in it And maybe someday you would be a racing horse and win a Race.

* * * * *

a cat

If I were a cat I would sit by a warm fire and lick my paws and drink warm milk And in the early morning I would run outside and jump merely in the wind. I would run up a tree and down again. I would chase bird's and mice and jump happily in the wind with the sun on my face. I think it would be nice to be a cat Don't you think so too? I know I do! It would make me happy to do such things.

The End

Score Point 4

If I Was A Mug

If I was a mug I would sit on the bathroom sink and wait for morning. When morning came, someone would come in and brush their teeth. Then they would fill me up with water and take a drink from me. It might feel like someone sucking my blood, but I wouldn't care. It would be fun to have someone pour water into me and then drink from me. I probably wouldn't sleep in case someone wanted a drink of water in the middle of the night. But I wouldn't get tired because mugs don't get tired. The only problem would be if someone dropped me and I broke. That wouldn't be Fun. But then if that someone glued me back together it would be okay. But it wouldn't be the same.

THE END

Gotter

When a gotter gets hot he just goes into his hotel and what I would do. If I were a gotter I would explore all the fuel and holes I could find. I would climb a tree and look out into the valley. I would swim in the river. I would play with my friends the ground hog, squirrel, chipmonk, and otter. We would all have fun!!!!. I would'nt have to go to school either. I would eat berries, meat, and take lots of naps. I would live in a hollow tree. And look out and watch the birds fly. All this is what I would do if I were a gotter.

"Puppy Letter" Exercise

Pretend that you family is moving to a new apartment. The landlord has refused to let your puppy live there. Write the landlord a letter, trying to convince him to let you keep your puppy in the new apartment.

Space is provided below and on the next two pages. Sign your letter "Chris Smith."

240 West Street
Bigtown, Pennsylvania
January 4, 1979

Dear Mr. James,

WRITING TASK: Puppy

NAEP #: 0-201001-52A-1

RHETORICAL MODE: Persuasive - Social/Personal

OBJECTIVE: II. Demonstrates ability to write in response to a wide range of societal demands and obligations. Ability is defined to include correctness in usage, punctuation, spelling, and form or convention as appropriate to particular writing tasks, e.g., manuscripts, letters.

SUBOBJECTIVE: A. Social 1. Personal

NAEP SCORING: Primary Trait: Situationally unique persuasion through making of appropriate appeals.

AGE: 9

TOTAL TIME IN SECONDS: 743

NUMBER OF LINES: p.1 - 10
p.2 - 26
p.3 - 21

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TRAIT SCORING GUIDE
"LETTER TO LANDLORD ABOUT PUPPY"

Rhetorical Mode: Persuasive - Social/Personal

Primary Trait: Situationally unique persuasion through making of appropriate appeals.

Rationale of Primary Trait: Essentially this is an exercise to determine how well a nine-year-old can cope with rhetorical appeals. The request for a letter to a landlord establishes a particular audience. The situation, keeping a pet in the face of opposition, focuses the writer's appeals. By directing the writer to try to convince the reader, the exercise is persuasive, so a fully successful performance must contain appropriate appeals/reasons.

General Scoring Rationale: Given the limits of time and the age of the children, it would be unreasonable to expect elaborately structured arguments. Even the better writers may produce appeals/reasons in a relatively discrete manner -- apparently thinking of one, writing it down, thinking of another, etc. Therefore, readers should concentrate attention on the writer's success at finding and formulating appeals appropriate to the audience and situation.

Scoring Guide Categories:

0 = No response.

1 = Letters lacking appeals/reasons: These letters either contain no appeals or only name inappropriate or vague reasons. They tend to 1) be confusing in that it is difficult to understand what the situation really is or what the letter is supposed to accomplish, 2) be comprised mainly of threats of violence or retribution, or 3) request to keep the puppy but offer no appeals or only offer a request with one general statement which is not sufficiently specific or relevant to be considered an appeal.

Scoring Guide Categories (continued):

2 = Letters with limited appeals/reasons: Letters in this category cover a broad range, but all are in some sense underdeveloped. Some letters request to keep the puppy and offer one or two practical or sympathetic appeals. Others offer several (2 or more) appropriate appeals or general statements, but only infer that the purpose of the letter is a request to keep the puppy. If a response includes a request and several appeals one of which is inappropriate, the persuasive qualities will be less effective and the letter will probably remain in the "2" category.

3 = Letters substantiated with appropriate appeals/reasons: Generally these letters include a request substantiated with approximately three concrete appeals. However, some "3" letters cite numerous (4 or more) reasons but they are presented as a list rather than a unified request. Unusually effective presentations of pathetic appeals or rational negotiations may also be classified in the "3" category.

4 = Letters developed and substantiated with appropriate appeals/reasons. These letters are organized such that they operate as a unified piece of persuasion. They tend to have openings, closings or both and contain numerous (4 or more) appeals. Not all of the separate appeals need to be developed, but usually one is, and all the appeals are appropriate.

7 = Illegible, illiterate.

8 = Misunderstands the task, writes on another topic.

9 = I don't know.

NOTE: Some examples of appeals are listed on the following page.

Types of Appropriate Appeals/Reasons:

1) Practical/Specific - "He's house trained." "He doesn't shed." "I'll take him for walks." "He doesn't bark." "I'll give him baths." "Doesn't chew on furniture." "He's quiet." "He's a small breed." "I will pay more rent." "I won't let him outside, except to take him for walks."

2) Sympathetic/Pathetic - dog birthday present, pleading (I will cry, please, please), had dog since was baby, the dog will die, dog legacy of dead grandmother, dog only friend, etc.

3) Other - suggesting a tryout period, nice introductions (allow me to introduce myself), observing that you understand why the landlord doesn't allow pets, etc.

Types of Inappropriate Appeals/Reasons:

1) Mildly inappropriate - offer to give dog to landlord, will move if can't keep dog, the dog will never go outside.

2) Totally inappropriate - violent threats, giant bribes, childish ranting - "I will hate you."

3) Contradictory - good watch dogs that don't bark or bite.

Types of Vague Appeals/Reasons and General Statements:

"I'll feed my dog." "He won't wreck the apartment." "I'll take care of my dog." "He's a black and white dog." "He's small." "He'll be no trouble." "I love my dog." "He's cute." "I want to keep my dog." "My dog is harmless."

SAMPLES

Primary Trait

Score Point 1

We wood clean up all the stuff that is around us if you wood let him.

He will pick up aroundus and He will bring are stuff up. We want Him to stay. let him stay and We will Hlep you.

"chris Smith"

* * * * *

about that puppy it has ben with me for six years and I hope to have him longer Chris Smith

Score Point 2

We will cepe our pupey out of trubl he will pot cause any trebl we will cepe him inside in til we go some were may we pleas cepe him he is nice and quite he is a good dog I hope you let us you will like him so let us cepe him.

Chris Smith

* * * * *

Please wood you let my puppy live here please. I will let my puppy outside I will sleep outside please. I will give my puppy a bath outside Please from Chris Chris Smith Please

Score Point 3

I would like to keep my puppy she does not look she is very quit she does not scrach any ou she has her claws clipt of and she sleeps on my bed she is a very si puppy she lick when anyone comes in and dose not go the bath room

Sincerly yours.
Chris Smith

* * * * *

I can understand why you won't let animals in your apartment house. But my puppy is very nice and I am sure he won't mes up the apartment. I will be sure to watch him and take him out alot. Please let me keep him.

Sincerly,
Chris Smith

Score Point 4

I love my pupy more than anything Please let me keep my pupy he won't get into trouble I promise. He doesn't eat much and he likes you he likes Kids too I have my own place for him to go to the bathroom and everything he is clean doesn't have ticks or fleas he doesn't bite or howl he doesn't make a mess or skratch he's lovable and good. I'll take him for walks every day and feed him so he's not hungry I'll keep him most of the time in a pen I made for him. He's very cute and doesn't smell he plays with his bones I give him. He likes people. He likes to go on walks and camping. He's got short fur and he is very quit Please! let me keep him Please!

Your Freind

Chris Smith

* * * * *

My name is Chris Smith. Please let me keep my puppy. He will do anything for him to know I love my puppy and i want to keep him. He is the only friend I have. He does not bite or nothing like that. He is the nicest dog in the world. He wont have puppies because it is a boy. I will keep him out of trouble so. We will not let him run in the people on the streets. We will not let him dump over the cans. He does not keep people up at night and he is a good watch dog. You will like him. He will even protect you.

Love

Chris Smith

FREE -- THE POSTER CALENDAR OF YOUR CHOICE!!!

Get a beautiful poster calendar free!

Choose either:

1. Famous Rock Group

or

2. Mountains and Stream

Tell me which poster you want. If you ask me for it and tell me your name and address, I will send you your beautiful poster.

Sincerely,

Mary Jones, Manager
National Book Store

Pretend that your name is Chris Brown and that you live at 37 Elm Street, Gulf, Ohio 76543. On the next page, write a letter to Mary Jones requesting the calendar.

WRITING TASK: Poster Calendar

NAEP #: 0-202031-A1A-12

RHETORICAL MODE: Explanatory - Business

OBJECTIVE: II. Demonstrates ability to write in response to a wide range of societal demands and obligations. Ability is defined to include correctness in usage, punctuation, spelling, and form or convention as appropriate to particular writing tasks, e.g., manuscripts, letters.

SUBOBJECTIVE: B. Business/Vocational

NAEP SCORING: Primary Trait: Explanation through supplying of information in a form required by a situation.

AGE:	9	13
TOTAL TIME IN SECONDS:	407	410
NUMBER OF LINES:	p.1 - 13 p.2 - 10	p.1 - 23

TRAIT SCORING GUIDE
"POSTER CALENDAR"

Rhetorical Mode: Explanatory - Business

Primary Trait: Explanation through supplying of information in a form required by a situation.

Rationale of Primary Trait: The stimulus for this exercise requires respondents to clearly communicate the information necessary to receive the poster calendar of their choice. It also suggests that the response should conform to the conventions of a letter of request. The main issue is will the letter accomplish its purpose -- the receipt of the selected poster calendar. The tone and style of the letter are of lesser importance.

General Scoring Rationale: The main criteria for rating this exercise are the presence and accuracy of the information transmitted. Readers should look for a greeting, the name of the sender, the address of the sender, a request, identification of the poster calendar and a statement of choice.

Scoring Guide Categories:

0 = No response.

1 = Name or address is in some crucial sense incomplete and/or calendar not referred to in any way.

2 = The writer gives name and address and requests or refers to calendar, but does not give a specific choice.

3 = The writer directly requests calendar (i.e., something like "Please send me the free poster calendar"); gives name and address; states choice.

7 = Illegible, illiterate.

8 = Misunderstands the task, writes on another topic.

9 = I don't know.

NOTE: Due to the straightforward nature of the task, this guide did not include a category "4." It was felt that a "3" was sufficient and no further elaboration was necessary.

Also, to maximize reporting capabilities National Assessment categorized the following six pieces of information as present or not present. The four trait categories were derived through data analysis.

A: Greeting/Miss, Mrs., Ms., Mary Jones, To Mary, Manager National Book Store
B: Name/Chris Brown, Chris, Brown
C: Address/37 Elm Street
Gulf, Ohio 76543
D: Request/Please send me the free poster calendar
E: Refers to calendar or poster or picture
F: States choice

SAMPLES

Primary Trait

Score Point 1

I want the mountains and Stream
Mary Jones managers

* * * * *

Dear Mary Jones
I would like to have the Mountains and Stream 37 Elm Street Gulf, Ohio 76543

Score Point 2

Dear Mary Jones My Name is Chris Brown I live at 37 Elm Street, Gulf, Ohio 76543. I am 9 year old am in the Fourth grade I would like to have famous Rock Group And I hope you are find am very find am a nice sweet little girl

* * * * *

Dear miss jones
I would like the calander. My name is chris jones I live at 37 elm strat Gulf ohio 76543 thank you
Chris J Brown

Score Point 3

Dear Thanny Jones,
I would like to have one of your calenders, I would like a Famous Rock Group calender. Everyone tells me that they are wonderful.
Sincerely,
Chris Brown
37 Elm Street
Gulf, Ohio
76543

* * * * *

Dear Mary Jones
I would like to have the poster calendar that has Famous Rock Group on it I like that one
My address is.
Chris Brown
37 Elm Street, Gulf Ohio 76543.

APPENDIX B

GUIDELINES FOR SYNTAX AND MECHANICS ANALYSIS

Appendix B contains outlines of the features National Assessment hand tabulated for the T-unit analysis of syntax, the sentence-type analysis, and the mechanics analysis. It should be noted that since National Assessment computerized the text of all the papers involved in these studies, basic descriptive counts (average essay length, average word length, etc.) were machine tabulated. Rationales, as well as detailed definitions of the outlined features, are contained in Mullis and Mellon (1980). Also, the detailed guidelines used by the scorers who accomplished these tabulations are available from National Assessment.

SYNTAX SCORING GUIDE OUTLINE
T-UNIT ANALYSIS
(Developed for the 1978-79 Writing Assessment)
"Fireflies" -- Narrative Exercise

I. T-unit delineation -- A T-unit is one main clause with all its phrases and subordinating clauses. (Fragments are included with either the preceding or the following T-unit, as appropriate.)

II. Embedding

A. Nominalization

1. Nominal Clauses -- clauses used as subjects, direct objects, subject complements or objects of prepositions.

2. Nominal Phrases -- phrases used as subjects, direct objects, subject complements or objects of prepositions.

B. Modification

1. Adjectival

a. Relative Clauses -- clauses that modify nouns or, occasionally, complete sentences including clauses of time, place and manner.

b. Modifying Phrases -- restrictive and non-restrictive phrases directly following the nouns they modify.

c. Transposed Modifying Phrases -- non-restrictive phrases separated from the nouns they modify, verbal phrases, nominative absolutes, appositive noun phrases.

d. Genitives -- possessive phrases, pre-noun proper name possessives and possessive pronouns.

e. Single Word Pre-noun Modifiers -- adjectives that precede the nouns they modify.

2. Adverbial

   a. Adverbial Clauses -- clauses of reason (cause/purpose)--because, condition--if, and concession--although.

   b. Adverbial Phrases -- phrases of reason (cause/purpose)--condition and concession.

III. Conjoining and Connective Devices

A. Coordinate
(Since NAEP computerized the text for the essays, counts of both intra- and inter-T-unit uses of "and" and "or" were machine tabulated.)

B. Semantic (other logical relationships)

1. Time naming structures -- clauses or phrases that establish time.

2. Adversatives and illatives -- words, clauses, or phrases that establish time.

3. Other signposts -- words, clauses, or phrases that indicate an addition, a sequence, or a comparison.

SYNTAX (SENTENCE TYPES) AND MECHANICS
SCORING GUIDE OUTLINE
(Developed for the 1973-74 Writing Assessment)
"Fireflies" -- Narrative Exercise
"Kangaroo" -- Narrative Exercise

I. Sentence Level Syntax Categories

Description of Sentence Types

1. Minor sentence (correct fragment) -- A word group used in dialogue, for emphasis, or as an exclamation that is not an independent clause.

2. Simple -- A sentence that contains a subject and a verb. It may also have an object or a subject complement.

3. Simple with phrase -- A simple sentence that contains a prepositional, infinitive, gerund and/or participial phrase. Sentences containing appositives, nominative absolutes, and verbals were also scored in this category.

4. Compound -- A sentence containing two or more simple sentences joined by something other than a comma.

5. Compound with phrase -- A compound sentence containing at least one phrase in one of the independent clauses.

6. Complex (and compound-complex) -- A sentence containing at least one independent clause and one dependent clause.

7. Complex (and compound-complex) with phrase -- A sentence containing at least one independent clause, one dependent clause, and one phrase.

II. Sentence Level Mechanics Categories

A. Sentence Types with Punctuation Errors (sentences that do not fall into any of the syntax categories).

1. Run-on Sentence

   a. Fused -- A sentence containing two or more independent clauses with no punctuation or conjunction separating them.

   b. On and on -- A sentence consisting of four or more independent clauses strung together with conjunctions.

   c. Comma splice -- A sentence containing two or more independent clauses separated by a comma instead of a semicolon or a coordinating conjunction.

2. Incorrect fragment -- A word group, other than an independent clause, written and punctuated as a sentence.

NOTE: The scoring of T-unit constituents made it possible for some of the preceding sentence types to be derived through data analysis for the "Rainy Day" papers.

B. Faulty Sentence Construction (These scores are in addition to the sentence types.)

1. Agreement Error -- A sentence where at least one of the following is present: subject/verb do not agree, pronoun/antecedent do not agree, noun/modifier do not agree, subject/object pronoun misused, and/or verb tense shifts.

2. Awkward Sentence (The awkward categories are listed in order of category precedence, since only one score was given to a sentence.)

   a. Faulty parallelism -- A parallel construction that is semantically or structurally dysfunctional.

   b. Unclear pronoun reference -- A pronoun's antecedent is unclear.

   c. Illogical construction -- Faulty modification or a dangling modifier or a functionally misarranged or misproportioned sentence.

   d. Other dysfunctions -- A sentence containing an omitted or extra word and/or a split construction that definitely detracts from readability.

III. Punctuation Errors -- Every error of commission and error of omission is scored for commas, dashes, quotation marks, semicolons, apostrophes, and end marks. The most informal rules of usage are used with the writer receiving the benefit of any doubt.

IV. Word Level Mechanics Categories

A. Word Choice -- The writer needs a word that is different from the one written. This category also includes attempts at a verb, adjective, or adverb form that is nonexistent or unacceptable.

B. Spelling -- In addition to a misspelling, this category includes word division errors at the end of a line, two words written as one, one word written as two, superfluous plurals, and groups of distinguishable letters that do not make a legitimate word.

C. Capitalization -- A word is given a capitalization error score if the first word in a sentence is not capitalized, if a proper noun or adjective within a sentence is not capitalized, and if the pronoun "I" is not capitalized.

The mechanics scoring was designed to allow the writer as much flexibility as possible under existing rules of correct writing; consequently, any time two authorities on mechanics disagreed, the most informal interpretation was used.

APPENDIX C

GROUP RESULTS, EXERCISES EVALUATED FOR PRIMARY TRAIT AND COHESION

The tables in Appendix C present group differences from the national percentage, not the actual performance of the group. Thus, if the national percentage for a particular item is, for example 71% and the group difference from the nation is 12%, the group percentage, or performance level, is 71 plus 12, or 83%. The advantage to presenting group data in terms of differences is that such tables enable one to see whether the relative position of a group, vis-a-vis the nation, is changing. As before, an asterisk next to a group difference signifies that the difference is statistically significant; an asterisk next to the percentage estimating the change for that group signifies that the change is statistically significant.

Table C-1. "Fireflies" Exercise, Primary Trait
Table C-2. "Fireflies" Exercise, Cohesion
Table C-3. "Goldfish" Exercise, Primary Trait
Table C-4. "Puppy Letter" Exercise, Primary Trait
Table C-5. "Poster Calendar" Exercise, Primary Trait

TABLE C–1. Group Differences From National Percentages, "Fireflies" Exercise Primary Trait Scores, 1970, 1974, 1979

	Year	Nonrateable	Some Explanation, No Story	Ample Explanation, Little/No Story	Adequate Story	Developed Story	Marginal or Better	Competent or Better
		0	1	2	3	4	2,3&4	3&4
Nation (%)	1970	5.4	31.7	46.1	14.8	1.9	62.8	16.8
	1974	4.3	21.8	58.4	14.0	1.4	73.9	15.5
	1979	3.3	29.3	57.3	9.4	0.6	67.3	10.0
	1970–79	-2.0*	-2.4	11.2*	-5.4*	-1.3*	4.5	-6.8*
Region								
Southeast	1970	7.4*	1.5	-3.6	-5.2*	0.0	-8.8*	-5.2*
	1974	3.0*	1.1	2.3	-5.9*	-0.5	-4.0	-6.4*
	1979	1.0	0.3	-0.9	-0.3	-0.1	-1.4	-0.5
	1970–79	-6.3*	-1.1	2.7	4.8*	-0.1	7.4	4.7
West	1970	-1.6	4.2	-3.7	0.4	0.8	-2.5	1.1
	1974	-0.2	2.5	-4.2*	2.3	-0.4	-2.3	1.9
	1979	0.1	4.0	-5.4*	1.3	0.0	-4.1	1.3
	1970–79	1.7	-0.1	-1.7	0.9	-0.8	-1.6	0.1
Central	1970	-1.7*	0.1	3.7	-1.2	-0.8	1.7	-2.0
	1974	0.2	-1.4	-2.0	3.2	0.1	1.2	3.3
	1979	-0.7	-3.0	2.7	1.3	-0.2	3.8	1.1
	1970–79	1.0	-3.1	-1.0	2.6	0.5	2.1	3.1
Northeast	1970	-1.5*	-5.3	1.8	4.7*	0.2	6.7*	4.9*
	1974	-2.2*	-1.3	3.1	-0.1	0.6	3.6	0.5
	1979	-0.5	-1.8	4.0	-2.0	0.2	2.3	-1.7
	1970–79	1.0	3.4	2.1	-6.7*	0.1	-4.4	-6.5*
Sex								
Male	1970	2.0	4.2*	-3.0*	-2.8*	-0.4	-6.2*	-3.2*
	1974	1.7*	7.4*	-5.7*	-3.1*	-0.3	-9.1*	-3.4*
	1979	1.5*	7.7*	-5.2*	-3.7*	-0.2*	-9.2*	-4.0*
	1970–79	-0.4	3.5*	-2.3	-0.9	0.1	-3.0	-0.7

TABLE C-1 — *Continued.*

	Year	Nonrateable	Some Explanation, No Story	Ample Explanation, Little/No Story	Adequate Story	Developed Story	Marginal or Better	Competent or Better
		0	1	2	3	4	2,3&4	3&4
Female	1970	-2.1	-4.4*	3.1*	2.9*	0.4	6.4*	3.3*
	1974	-1.5*	-6.8*	5.3*	2.8*	0.3	8.4*	3.1*
	1979	-1.5*	-8.0*	5.5*	3.9*	0.3*	9.6*	4.2*
	1970–79	0.4	-3.7*	2.4	1.0	-0.2	3.2	0.8
Race								
White	1970	-2.5*	-3.4*	3.4*	2.0*	0.4*	5.9*	2.5*
	1974	-0.9*	-2.4*	1.4	1.6*	0.3*	3.4*	1.9*
	1979	-0.9*	-0.7	0.8	0.8*	-0.1	1.5	0.7*
	1970–79	1.7*	2.8*	-2.6*	-1.2*	-0.5*	-4.4*	-1.8*
Black	1970	12.5*	13.4*	-14.4*	-9.7*	-1.9*	-25.9*	-11.5*
	1974	5.3*	12.5*	-8.3	-8.4*	-1.1*	-17.8*	-9.5*
	1979	2.9	3.4	-3.5	-3.0*	0.2	-6.3	2.8
	1970–79	-9.7*	-10.0*	10.2*	6.7*	2.0*	19.6*	8.7*
Parental education								
Not grad. high school	1970	2.7*	4.1	-1.5	-4.5*	-0.7	-6.8	-5.2*
	1974	2.1	3.3	-1.3	-3.6	-0.6	-5.5*	-4.2
	1979	6.8*	8.7	-12.7*	-2.2	-0.6*	-15.6*	-2.8
	1970–79	4.1*	4.6	-11.2	2.3	0.0	-8.8	2.4
Grad. high school	1970	-1.4	-4.1*	4.9*	0.8	-0.1	5.5*	0.6
	1974	-1.3	-2.0	2.0	1.2	0.2	3.4	1.4
	1979	-1.1	-1.5	1.2	1.4	0.1	2.6	1.5
	1970–79	0.3	2.6	-3.7	0.6	0.2	-2.9	0.8
Post high school	1970	-2.7*	-3.3*	-0.7	5.3*	1.5	6.1*	6.7*
	1974	-0.9	-4.3*	-1.0	6.1*	0.0	5.2*	6.2*
	1979	-1.0	-5.7*	5.2*	1.0	0.4	6.7*	1.4
	1970–79	1.7	-2.4	5.9*	-4.2*	-1.1	0.6	-5.3*

TABLE C-1 — *Continued.*

	Year	Nonrateable	Some Explanation, No Story	Ample Explanation, Little/No Story	Adequate Story	Developed Story	Marginal or Better	Competent or Better
		0	1	2	3	4	2,3&4	3&4
Type of community#								
Disadvantaged urban	1970	13.0*	17.8*	-18.5*	-11.0*	-1.3*	-30.7*	-12.3*
	1974	6.4*	18.5*	-13.5*	-11.5*	0.1	-24.9*	-11.4*
	1979	4.6*	5.7	-6.2	-3.5	-0.6*	-10.3	-4.1
	1970–79	-8.4*	-12.1	12.3	7.5*	0.7	20.5*	8.2*
Rural	1970	2.4	8.6	-2.7	-6.5*	-1.7*	-11.0	-8.2*
	1974	2.8	-1.4	-9.2*	9.1	-1.4*	-1.5	7.7
	1979	-0.5	-4.4	4.3	0.9	-0.3	4.9	0.6
	1970–79	-2.8	-13.0	7.0	7.5	1.3*	15.8*	8.8*
Advantaged urban	1970	-2.5*	-12.9*	6.1	8.4*	0.9	15.4*	9.3*
	1974	-3.6*	-4.2	2.1	5.3	0.4	7.8	5.7*
	1979	-2.5*	-3.3	1.4	4.6	-0.1	5.9	4.5
	1970–79	0.0	9.5	-4.7	-3.7	-1.0	-9.5	-4.8
Grade								
3	1970	8.1*	19.3*	-15.7*	-10.0*	-1.6*	-27.4*	-11.7*
	1974	5.9*	10.5*	-7.2*	-8.2*	-1.0*	-16.4*	-9.2*
	1979	4.6*	9.8*	-10.5*	-3.2	-0.6*	-14.3*	-3.8*
	1970–79	-3.5	-9.5*	5.2	6.8*	1.0*	13.1*	7.8*
4	1970	-3.1*	-5.7*	5.2*	3.0*	0.6*	8.7*	3.5*
	1974	-1.7*	-2.6*	1.9*	2.2*	0.2	4.2*	2.3*
	1979	-1.9*	-3.7*	4.3*	1.2*	0.2*	5.7*	1.4*
	1970–79	1.1	1.9	-0.9	-1.8*	-0.3*	-3.0*	-2.1*

**Statistically significant at the .05 level.*

~Percentages may not total due to rounding error.

#These population groups represent about one-third of the sample.

TABLE C–2. Group Differences From National Percentages, "Fireflies" Exercise Cohesion Scores, 1970, 1974, 1979

	Year	Nonrateable 0	Inadequate 1	Attempts at Cohesion 2	Cohesion 3	Cohesion and Coherence 4	Competent or Better 3&4
Nation (%)	1970	5.4	29.1	43.1	20.3	2.0	22.3
	1974	4.3	24.8	45.4	23.8	1.7	25.5
	1979	3.3	28.8	46.0	20.9	1.0	21.9
	1970–79	-2.0	-0.3	2.9	0.5	-1.0*	-0.5
Region							
Southeast	1970	7.4*	1.9	-2.0	-7.2*	-0.1	-7.3*
	1974	3.0*	5.2*	-0.8	-6.7*	-0.6	-7.3*
	1979	1.0	2.6	-1.5	-1.7	-0.5	-2.2
	1970–79	-6.3*	0.7	0.5	5.5	-0.4	5.1
West	1970	-1.6	4.9	-4.2	0.3	0.7	1.0
	1974	-0.2	0.1	1.2	-0.7	-0.4	-1.1
	1979	0.1	4.5	-3.8	-1.1	0.3	-0.7
	1970–79	1.7	-0.4	0.4	-1.3	-0.4	-1.8
Central	1970	-1.7*	-0.7	4.9*	-1.8	-0.7	-2.5
	1974	0.2	1.1	-2.2	0.8	0.2	1.0
	1979	-0.7	-1.0	0.5	1.6	-0.3	1.3
	1970–79	1.0	-0.3	-4.4	3.4	0.3	3.7
Northeast	1970	-1.5*	-5.3*	-0.3	6.9*	0.1	7.1*
	1974	-2.2*	-3.0*	1.8	4.8*	0.6	5.4*
	1979	-0.5	-5.9*	4.7*	1.3	0.4	1.7
	1970–79	1.0	-0.6	5.0	-5.6	0.3	-5.4
Sex							
Male	1970	2.0*	1.2	0.4	-2.4	-0.4	-2.8
	1974	1.7*	1.5	0.3	-3.1*	-0.5*	-3.6*
	1979	1.5*	4.1*	-1.7	-3.3*	-0.6*	-3.9*
	1970–79	-0.4	2.8	-1.4	-0.9	-0.1	-1.0

TABLE C-2 -- *Continued.*

	Year	Nonrateable	Inadequate	Attempts at Cohesion	Cohesion	Cohesion and Coherence	Competent or Better
		0	1	2	3	4	3&4
Female	1970	-2.1*	-1.3	0.4	2.5	0.5	2.9
	1974	-1.5*	-1.4	-0.3	2.8*	0.5*	3.3*
	1979	-1.5*	-4.3*	1.8	3.5*	0.6*	4.0*
	1970–79	0.4	-3.0	1.4	1.0	0.1	1.1
Race							
White	1970	-2.5*	-3.7*	3.0*	2.8*	0.5*	3.2*
	1974	-0.9*	-2.9*	0.7	2.8*	0.4*	3.2*
	1979	-0.9*	-2.1*	1.5*	1.6*	-0.1	1.5*
	1970–79	1.7*	1.7	-1.5	-1.1	-0.6*	-1.7*
Black	1970	12.5*	15.9*	-14.1*	-12.4*	-1.9*	-14.4*
	1974	5.3	15.1*	-5.3*	-13.7*	-1.4*	-15.1*
	1979	2.9	7.8*	-3.5	-7.4*	0.2	-7.2*
	1970–79	-9.7*	-8.2*	10.7*	5.1	2.1*	7.2*
Parental education							
Not grad. high school	1970	2.7*	3.6	1.1	-6.6*	-0.7	-7.3*
	1974	2.1	0.7	-0.3	-1.9	-0.6	-2.5
	1979	6.8*	13.8*	-11.8*	-7.9*	-1.0*	-8.8*
	1970–79	4.1	10.2	-12.9*	-1.3	-0.3	-1.6
Grad. high school	1970	-1.4	-1.4	-0.8	3.8	-0.2	3.6
	1974	-1.3	0.9	-1.0	1.0	0.4	1.4
	1979	-1.1	-0.2	-0.6	1.7	0.2	1.8
	1970–79	0.3	1.2	0.3	-2.1	0.3	-1.8
Post high school	1970	-2.7*	-5.2*	2.0	4.5*	1.4	5.9*
	1974	-0.9	-6.6*	3.8*	3.5*	0.2	3.7*
	1979	-1.0	-6.0*	2.8	3.7*	0.4	4.1*
	1970–79	1.7	-0.8	0.8	-0.7	-1.0	-1.8

TABLE C-2 — *Continued.*

	Year	Nonrateable	Inadequate	Attempts at Cohesion	Cohesion	Cohesion and Coherence	Competent or Better
		0	1	2	3	4	3&4
Type of community#							
Disadvantaged urban	1970	13.0*	20.6*	-17.0*	-15.2*	-1.4*	-16.6*
	1974	6.4*	19.8*	-9.6	-16.3*	-0.1	-16.5*
	1979	4.6*	15.0*	-12.5*	-6.0	-1.0*	-7.0
	1970–79	-8.4*	-5.6	4.4	9.2	0.4	9.6
Rural	1970	2.4*	7.8	2.5	-10.9*	-1.7*	-12.7*
	1974	2.8	-2.0	-6.2	6.7	-1.4*	5.3
	1979	-0.5	-0 7	-0.8	2.6	-0.6	2.0
	1970–79	-2.8	-8.6	-3.2	13.5*	1.2*	14.7*
Advantaged urban	1970	-2.5*	-9.1*	4.0	6.9*	0.8	7.7*
	1974	-3.6*	-4.4*	0.1	7.4*	0.4	7.8*
	1979	-2.5*	-5.7	0.3	7.4*	0.5	7.9*
	1970–79	0.0	3.5	-3.6	0.5	-0.4	0.1
Grade							
3	1970	8.1*	13.6*	-8.4*	-11.7*	-1.7*	-13.3*
	1974	5.9*	13.1*	-7.0*	-11.0*	-1.1*	-12.1*
	1979	4.6*	10.1*	-4.8*	-8.9*	-1.0*	-9.9*
	1970–79	-3.5	-3.6	3.6	2.8	0.7	3.5
4	1970	-3.1*	-4.3*	3.2*	3.6*	0.6*	4.2*
	1974	-1.7*	-3.5*	1.9*	3.0*	0.2	3.2*
	1979	-1.9*	-4.1*	2.4*	3.3*	0.3*	3.6*
	1970–79	1.1	0.3	-0.8	-0.3	-0.2	-0.5

**Statistically significant at the .05 level.*

∼ *Percentages may not total due to rounding error.*

#*These population groups represent about one-third of the sample.*

TABLE C–3. Group Differences From National Percentages, "Goldfish" Exercise Primary Trait Scores, 1974, 1979∿

	Year	Nonrateable	Little About Thing	Some Details	Elaborated Thing	Unified Detailed Thing	Marginal or Better	Competent or Better
		0	1	2	3	4	2,3&4	3&4
Nation (%)	1974	4.6	58.5	23.5	11.8	1.5	36.9	13.4
	1979	3.1	56.8	26.4	12.5	1.2	40.1	13.7
	1974–79	-1.5	-1.7	2.9	0.7	-0.4	3.3	0.3
Region								
Southeast	1974	4.1*	-1.4	-4.0*	1.2	0.2	-2.6	1.3
	1979	1.5	1.9	-3.1	0.0	-0.3	-3.4	-0.3
	1974–79	-2.4	3.3	0.9	-1.2	-0.5	-0.8	-1.7
West	1974	-0.4	-0.3	4.0*	-2.1	-1.1*	0.7	-3.3*
	1979	-0.5	7.2*	-4.8*	-1.4	-0.5	-6.7*	-1.9
	1974–79	-0.1	7.5*	-8.8*	0.7	0.7	-7.4	1.4
Central	1974	0.0	-0.1	-0.8	1.2	-0.3	0.1	0.9
	1979	-0.6	-7.6*	7.6*	0.0	0.6	8.2*	0.6
	1974–79	-0.6	-7.5*	8.4*	-1.2	0.9	8.1*	-0.3
Northeast	1974	-2.8*	1.3	0.8	-0.3	0.9*	1.4	0.6
	1979	0.0	-1.3	-0.5	1.7	0.1	1.3	1.8
	1974–79	2.7*	-2.6	-1.3	2.0	-0.8	-0.1	1.2
Sex								
Male	1974	2.5*	2.6*	-1.7	-2.6*	-0.8*	-5.1*	-3.4*
	1979	1.6*	1.9	0.3	-3.2*	-0.6*	-3.6*	-3.9*
	1974–79	-0.8	-0.6	1.9	-0.6	0.2	1.5	-0.4
Female	1974	-2.5*	-2.6*	1.7	2.6*	0.8*	5.1*	3.4*
	1979	-1.9*	-2.2	-0.3	3.7*	0.7*	4.1*	4.4*
	1974–79	0.7	0.4	-2.0	1.0	-0.1	-1.0	0.9

TABLE C-3 – *Continued.*

	Year	Nonrateable	Little About Thing	Some Details	Elaborated Thing	Unified Detailed Thing	Marginal or Better	Competent or Better
		0	1	2	3	4	2,3&4	3&4
Race								
White	1974	-1.4*	-1.2*	1.3*	1.2*	0.1	2.6*	1.3*
	1979	-0.9*	-3.2*	2.7*	1.5*	0.0	4.1*	1.4*
	1974–79	0.5	-2.0*	1.4	0.2	-0.1	1.5	0.1
Black	1974	8.1*	5.3	-7.9*	-4.9*	-0.6	-13.4*	-5.5*
	1979	3.7*	16.0*	-11.2*	-8.2*	-0.3	-19.7*	-8.5*
	1974–79	-4.4	10.7*	-3.3	-3.3	0.3	-6.3	-3.0
Parental education								
Not grad. high school	1974	4.7*	0.8	-1.7	-4.2*	0.4	-5.5	-3.8*
	1979	2.8	4.1	-5.2	-0.6	-1.2*	-7.0	-1.8
	1974–79	-1.8	3.3	-3.4	3.6	-1.6	-1.4	2.0
Grad. high school	1974	-0.6	-0.8	0.4	1.8	-0.8*	1.4	1.0
	1979	-0.2	-2.8	-0.6	3.4*	0.3	3.1	3.7*
	1974–79	0.2	-2.0	-1.0	1.7	1.1	1.7	2.8
Post high school	1974	-2.1	-2.3	1.0	2.0	1.4*	4.4*	3.4*
	1979	-0.5	-6.7*	5.0*	1.3	0.9	7.3*	2.3
	1974–79	1.6	-4.5	4.0	-0.7	-0.4	2.9	-1.1
Type of community#								
Disadvantaged urban	1974	5.1*	7.4	-2.1	-9.3*	-1.1*	-12.5*	-10.4*
	1979	1.9	16.1*	-8.5*	-9.4*	-0.1	-18.0*	-9.5*
	1974–79	-3.2	8.7	-6.4	-0.1	1.0	-5.5	0.9
Rural	1974	0.2	1.4	-1.0	-0.5	-0.1	-1.6	-0.7
	1979	1.2	4.8	1.1	-7.7*	0.6	-6.0	-7.1*
	1974–79	1.1	3.4	2.1	-7.2	0.7	-4.4	-6.4
Advantaged urban	1974	-2.9*	-7.2*	3.7	5.5*	0.9	10.1*	6.4*
	1979	0.7	-15.6*	0.9	11.0	3.0	14.9*	14.0
	1974–79	3.5	-8.3	-2.8	5.5	2.1	4.8	7.6

TABLE C-3 — *Continued.*

	Year	Nonrateable	Little About Thing	Some Details	Elaborated Thing	Unified Detailed Thing	Marginal or Better	Competer or Better
		0	1	2	3	4	2,3&4	3&4
Grade								
3	1974	6.1*	9.5*	-7.5*	-6.5*	-1.5*	-15.6*	-8.1*
	1979	2.2*	9.5*	-3.7	-7.1*	-0.9*	-11.7*	-8.0*
	1974–79	-3.9*	0.0	3.8	-0.5	0.7	4.0	0.1
4	1974	-2.4*	-2.4*	2.4*	2.1*	0.4*	4.9*	2.5*
	1979	-1.2*	-3.1*	1.4*	2.6*	0.2	4.3*	2.9*
	1974–79	1.2*	-0.6	-1.0	0.5	-0.2	-0.6	0.4

**Statistically significant at the .05 level.*

∿*Percentages may not total due to rounding error.*

#*These population groups represent about one-third of the sample.*

TABLE C–4. Group Differences From National Percentages, "Puppy Letter" Exercise Primary Trait Scores, 1974, 1979∿

	Year	Nonrateable 0	No Appeals 1	Some Appeals 2	Good Appeals 3	Unified Letter 4	Marginal or Better 2,3&4	Competent or Better 3&4
Nation (%)	1974	9.3	31.0	44.2	12.9	2.6	59.7	15.5
	1979	6.3	32.1	46.1	13.4	2.2	61.7	15.6
	1974–79	-3.0*	1.0	1.9	0.4	-0.3	2.0	0.1
Region								
Southeast	1974	6.3*	1.6	-4.3	-2.1	-1.5*	-7.9*	-3.6
	1979	4.1*	2.5	-4.5	-1.9	-0.3	-6.6*	-2.2
	1974–79	-2.2	0.9	-0.2	0.2	1.2	1.2	1.4
West	1974	-2.5*	5.1*	-1.9	-0.8	0.1	-2.6	-0.7
	1979	-1.9	0.9	-0.1	1.3	-0.3	1.0	1.1
	1974–79	0.6	-4.2	1.8	2.1	-0.4	3.6	1.7
Central	1974	-2.9*	2.9	2.6	-2.2	-0.4	0.0	-2.3
	1979	-1.0	-0.2	3.5	-1.4	-0.7	1.3	-2.1
	1974–79	1.8	-3.2	0.9	0.8	-0.3	1.3	0.5
Northeast	1974	-0.2	-8.4*	2.6	4.5*	1.5	8.6*	6.0*
	1979	-1.7	-3.7	1.6	2.3	1.4	5.3	3.7
	1974–79	-1.5	4.8	-1.1	-2.2	-0.1	-3.3	-2.3
Sex								
Male	1974	2.8*	3.2*	-2.7*	-2.2*	-1.1*	-6.0*	-3.3*
	1979	2.3*	5.2*	-3.1*	-3.1*	-1.3*	-7.5*	-4.4*
	1974–79	-0.5	2.0	-0.4	-0.9	-0.2	-1.5	-1.1
Female	1974	-2.7*	-3.1*	2.6*	2.1*	1.1*	5.8*	3.2*
	1979	-2.4*	-5.4*	3.3*	3.2*	1.4*	7.8*	4.6*
	1974–79	0.3	-2.3	0.6	1.1	0.3	2.0	1.4
Race								
White	1974	-2.1*	-2.3*	2.7*	1.4*	0.3*	4.4*	1.7*
	1979	-1.9*	-2.3*	2.4*	1.5*	0.3	4.2*	1.8*
	1974–79	0.2	-0.1	-0.2	0.2	-0.1	-0.2	0.1

TABLE C-4 – *Continued.*

	Year	Nonrateable 0	No Appeals 1	Some Appeals 2	Good Appeals 3	Unified Letter 4	Marginal or Better 2,3&4	Competent or Better 3&4
Black	1974	12.3*	8.3*	-11.2*	-7.6*	-1.9*	-20.6*	-9.4*
	1979	9.2*	11.9*	-12.9*	-6.6*	-1.6*	-21.1*	-8.2*
	1974–79	-3.2	3.7	-1.7	1.0	0.2	-0.5	1.2
Parental education								
Not grad. high school	1974	4.2	5.3	-8.0*	-0.9	-0.7	-9.5*	-1.6
	1979	8.6*	10.5*	-9.3*	-7.6*	-2.2*	-19.1*	-9.8*
	1974–79	4.4	5.2	-1.3	-6.7*	-1.5	-9.6	-8.2*
Grad. high school	1974	-0.7	-0.7	1.6	-0.5	0.4	1.5	-0.1
	1979	-0.6	-2.6	4.4*	-1.1	0.0	3.2	-1.1
	1974–79	0.1	-1.9	2.8	-0.6	0.4	1.8	-1.0
Post high school	1974	-3.4*	-8.1*	5.9*	5.9*	0.6	11.5*	5.7*
	1979	-3.7*	-3.7*	0.8	6.0*	0.6	7.4*	6.6*
	1974–79	-0.3	4.4*	-5.0*	0.9	0.0	-4.1*	0.9
Type of community#								
Disadvantaged urban	1974	14.0*	8.2*	-14.4*	-6.1*	-1.7*	-22.3*	-7.8*
	1979	7.9*	11.3*	-10.6*	-7.1*	-1.5*	-19.2*	-8.6*
	1974–79	-6.2	3.1	3.9	-1.0	0.2	3.1	-0.8
Rural	1974	5.7	4.9*	-7.2*	-3.2	-0.3	-10.6*	-3.4
	1979	6.9*	5.8	-5.2	-6.4*	-1.1	-12.7*	-7.5*
	1974–79	1.1	0.9	2.0	-3.2	-0.8	-2.0	-4.0
Advantaged urban	1974	-7.9*	-9.4*	10.4*	5.3*	1.5	17.3*	6.8*
	1979	-6.2*	-10.8*	7.9	8.2	0.9	17.0*	9.1
	1974–79	1.7	-1.4	-2.6	2.9	-0.7	-0.3	2.2
Grade								
3	1974	9.5*	8.1*	-8.9*	-6.7*	-1.9*	-17.6*	-8.7*
	1979	6.6*	8.8*	-8.2*	-5.9*	-1.2*	-15.4*	-7.1*
	1974–79	-2.9*	0.7	0.7	0.8	0.7	2.2	1.5

TABLE C-4 — *Continued.*

	Year	Nonrateable	No Appeals	Some Appeals	Good Appeals	Unified Letter	Marginal or Better	Competent or Better
		0	1	2	3	4	2,3&4	3&4
4	1974	-3.7*	-2.3*	3.1*	2.2*	0.7*	6.0*	2.9*
	1979	-3.3*	-3.4*	3.9*	2.4*	0.5*	6.7*	2.8*
	1974–79	0.4	-1.1	0.8	0.2	-0.2	0.7	-0.1

**Statistically significant at the .05 level.*

~ Percentages may not total due to rounding error.

#These population groups represent about one-third of the sample.

TABLE C–5. Group Differences From National Percentages, "Poster Calendar" Exercise Primary Trait Scores, 1979∿

	Nonrateable	Incomplete	No Choice	Successful	Marginal or Better
	0	1	2	3	2&3
Nation (%)	8.3	39.3	3.4	48.9	52.3
Region					
Southeast	3.9*	3.2	-1.1	-6.1	-7.2
West	-2.4*	0.9	0.4	1.1	1.5
Central	-1.3	0.7	0.2	0.5	0.7
Northeast	-0.5	-5.5	0.6	5.4	6.0
Sex					
Male	2.5*	4.9*	0.3	-7.6*	-7.4*
Female	-2.6*	-5.1*	-0.3	8.0*	7.7*
Race					
White	-2.5*	-3.6*	0.1	6.0*	3.1*
Black	14.4*	15.3*	-0.9	-28.8*	-29.7*
Parental education					
Not grad. high school	13.8	7.5	2.2	-23.6*	-21.4*
Grad. high school	-1.3	0.9	-1.0	1.3	0.4
Post high school	-3.5*	-6.5*	0.9	9.1*	10.0*
Type of community#					
Disadvantaged urban	6.8*	15.2*	0.1	-22.2*	-22.1*
Rural	6.9*	6.9*	-1.3	-12.4*	-13.8*
Advantaged urban	-6.2*	-11.2	0.0	17.4*	17.4*
Grade					
3	9.0*	7.5*	0.1	-16.7*	-16.6*
4	-4.4*	-2.6*	0.1	7.0*	7.1*

**Statistically significant at the .05 level.*
∿ Percentages may not total due to rounding error.
#These population groups represent about one-third of the sample.

APPENDIX D

ERROR FREQUENCIES FOR GOOD AND POOR PAPERS AND SELECTED GROUPS

The tables in this Appendix display error frequencies for papers defined as good or poor by their primary trait, holistic and cohesion scores (3 and 4 = good, 1 and 2 = poor). In addition, error frequencies appear for males, females, blacks and whites. Sample sizes were too small to permit analysis of error frequencies for other reporting groups. The column of figures under "average number" presents the average number of errors per paper. The column under "average percent" presents the average percentage of errors per paper. When the error is a sentence level error—for example, awkward or agreement—the percentage represents the average percentage of sentences per paper containing that error. When the error is a word level error (for example, spelling), the percentage represents average percentage of misspelled words per paper.

TABLE D-1. Average Frequency and Changes in Average Frequency of Errors in Good and Poor Narrative Papers, Age 9, 1970, 1979†

"Fireflies"

	1970				1979				Change 1970-79			
	Good Papers PT 3&4		Poor Papers PT 1&2		Good Papers PT 3&4		Poor Papers PT 1&2		Good Papers PT 3&4		Poor Papers PT 1&2	
	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %
Sentence fragments	0.1	1.2	0.2	4.1	0.5	4.3	0.3	6.3	0.3	3.1	0.1*	2.2*
Run-on sentences	0.8	11.9	0.3	14.2	1.0	18.3	0.3	13.4	0.2	3.4	0.0	-0.9
Awkward sentences	1.2	19.4	0.8	28.9	1.3	20.3	0.8	28.6	0.1	0.9	-0.1	-0.3
Faulty parallelism	0.2	4.0	0.1	3.6	0.2	2.8	0.1	3.8	-0.1	-1.3	-0.0	0.2
Unclear pronoun reference	0.0	1.7	0.1	1.4	0.1	2.6	0.0	0.7	0.1	0.9	-0.0*	-0.7
Illogical constructions	0.1	2.3	0.1	2.3	0.0	0.2	0.0	0.7	-0.1*	-2.2*	-0.1*	-1.6*
Other dysfunctional constructions	0.8	11.3	0.6	21.7	1.0	14.7	0.6	23.4	0.3	3.4	0.1	1.8
Capitalization errors	0.4	--	0.3	--	1.3	--	0.5	--	0.8*	--	0.2	--
Misspelled words	5.7	6.1	3.3	11.1	6.9	6.1	4.0	11.2	1.2	-0.1	0.8*	0.1
Word-choice errors	0.6	0.6	0.3	1.2	0.7	0.6	0.3	0.8	0.1	-0.1	-0.0	-0.4*
Sentences with agreement errors	0.3	4.8	0.2	6.3	0.2	3.4	0.2	3.8	-0.1	-1.4	0.0	2.5
Total punctuation errors	3.8	--	1.3	--	6.6	--	1.5	--	2.9*	--	0.2	--
Comma errors	1.7	--	0.4	--	3.3	--	0.4	--	1.6*	--	0.0	--
Endmark errors	0.5	8.3	0.4	18.4	0.7	10.4	0.4	14.4	0.2	2.1	-0.0	-4.0
Number of respondents	556				596							

"Kangaroo"

	1970				1979				Change 1970-79			
	Good Papers Holistic 3&4		Poor Papers Holistic 1&2		Good Papers Holistic 3&4		Poor Papers Holistic 1&2		Good Papers Holistic 3&4		Poor Papers Holistic 1&2	
	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %
Sentence fragments	0.2	3.6	0.4	9.5	0.3	3.5	0.4	10.4	0.1	-0.0	0.1	1.0
Run-on sentences	0.5	17.3	0.2	11.9	0.6	14.2	0.4	15.0	0.0	-3.1	0.1*	3.1
Awkward sentences	0.8	21.1	0.6	27.1	0.7	15.5	0.7	21.9	-0.1	-5.7	0.0	-5.2
Capitalization errors	0.6	--	0.6	--	0.4	--	0.9	--	-0.1	--	0.3*	--
Misspelled words	3.8	6.5	3.3	10.4	3.9	5.2	4.6	12.8	0.2	-1.2*	1.4*	2.5*
Word-choice errors	0.5	0.7	0.4	1.1	0.4	0.5	0.4	1.2	-0.1	-0.2	0.0	0.1
Sentences with agreement errors	0.5	10.4	0.3	13.2	0.3	7.5	0.4	10.9	-0.1	-3.0	0.1	-2.3
Total punctuation errors	1.4	--	0.6	--	1.5	--	1.0	--	0.1	--	0.4*	--
Comma errors	0.7	--	0.2	--	0.9	--	0.2	--	0.1	--	0.0	--
Endmark errors	0.3	8.4	0.4	18.3	0.3	7.2	0.5	22.0	-0.0	-1.2	0.1*	3.7
Number of respondents	384				494							

*Statistically significant at the .05 level.
†Figures may not total due to rounding error.

TABLE D-2. Average Frequency and Changes in Average Frequency of Errors in Narrative Papers for Good and Poor Levels of Cohesion, Age 9, 1970, 1979†

"Fireflies"

	1970				1979				Change 1970-79			
	Good Papers Cohesion 3&4		Poor Papers Cohesion 1&2		Good Papers Cohesion 3&4		Poor Papers Cohesion 1&2		Good Papers Cohesion 3&4		Poor Papers Cohesion 1&2	
	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %	Avg. #	Avg. %
Sentence fragments	0.2	2.8	0.2	3.8	0.3	4.3	0.3	6.6	0.1	1.5	0.1*	2.7*
Run-on sentences	0.5	11.1	0.3	15.5	0.6	16.1	0.3	13.2	0.1	5.0	-0.0	-2.3
Awkward sentences	0.9	16.5	0.9	30.9	0.9	20.0	0.8	30.0	0.0	3.5	-0.1	-0.9
Faulty parallelism	0.2	2.4	0.1	4.2	0.1	2.7	0.1	4.0	-0.0	0.3	-0.0	-0.2
Unclear pronoun reference	0.0	1.6	0.1	1.4	0.1	1.4	0.0	0.7	0.0	-0.2	-0.0*	-0.7
Illogical constructions	0.1	2.1	0.1	2.3	0.0	0.7	0.0	0.8	-0.1*	-1.9*	-0.1*	-1.6*
Other dysfunctional constructions	0.6	10.4	0.6	23.0	0.7	15.8	0.7	24.5	0.1	5.3	0.1	1.5
Capitalization errors	0.3	--	0.3	--	0.7	--	0.5	--	0.4*	--	0.2	--
Misspelled words	4.3	5.6	3.5	11.8	5.0	6.4	4.1	12.0	0.8	0.8	0.6	0.1
Word-choice errors	0.4	0.6	0.4	1.3	0.5	0.6	0.3	0.8	0.1	0.0	-0.0	-0.5*
Sentences with agreement errors	0.2	3.6	0.2	6.8	0.2	7.4	0.2	8.6	0.0	3.8	0.0	1.8
Total punctuation errors	2.9	--	1.3	--	4.0	--	1.4	--	1.1	--	0.1	--
Comma errors	1.6	--	0.3	--	1.9	--	0.4	--	0.4	--	0.0	--
Endmark errors	0.4	10.5	0.4	18.7	0.4	6.8	0.4	16.0	0.0	-3.5	-0.0	-2.7
Number of respondents	118		438		117		479					

*Statistically significant at the .05 level.
†Figures may not total due to rounding error.

TABLE D-3. Average Frequency and Average Changes in Frequency of Errors in Two Narrative Papers for Selected Groups, Age 9, 1970, 1974, 1979†

	1979		1970-79		1979		1970-79	
	Male	Female	Male Change	Female Change	White	Black	White Change	Black Change
				"Fireflies"				
Avg. % sentence fragments	7.5	4.7	3.9*	1.2	6.1	5.2	2.9*	-0.9
Avg. % run-on sentences	12.3	15.3	-1.8	0.7	12.9	18.5	-1.4	-0.8
Avg. % awkward sentences	29.8	25.9	4.9	-3.1	28.2	44.7	0.9	1.5
Avg. % faulty parallelism	3.9	3.4	0.0	-0.1	3.5	4.9	-0.0	0.6
Avg. % unclear pronoun reference	0.6	1.2	-0.7	-0.5	0.7	2.0	-0.9	0.5
Avg. % illogical constructions	1.2	0.1	-0.8	-2.4*	0.7	0.4	-1.2	-4.7*
Avg. % other dysfunctional constructions	24.1	21.2	6.4	-0.2	20.2	17.5	3.0	5.0
Avg. # capitalization errors	0.5	0.6	0.2	0.3*	0.5	0.5	0.3*	-0.1
Avg. % misspelled words	12.3	9.3	0.7	0.3	10.7	13.0	1.1	-2.2
Avg. % word-choice errors	0.8	0.8	-0.4	-0.3	0.6	1.4	-0.2	-0.9
Avg. % sentences with agreement errors	7.4	9.3	0.4	4.1*	6.1	18.6	1.3	1.4
Avg. # total punctuation errors	1.4	2.5	-0.4	0.8*	1.8	2.7	0.0	0.8
Avg. # comma errors	0.4	1.0	-0.2	0.3	0.7	0.7	-0.0	0.3
Avg. # endmark errors	0.4	0.5	-0.2*	0.2	0.3	0.9	-0.0	-0.0
Number of respondents	259	297			357	156		
				"Kangaroo"				
Avg. % sentence fragments	10.0	4.4	2.7	-2.1				
Avg. % run-on sentences	13.2	15.8	-2.7	3.3				
Avg. % awkward sentences	19.6	17.9	-7.6*	-3.7				
Avg. # capitalization errors	0.5	0.8	0.0	0.1				
Avg. % misspelled words	10.3	7.9	0.8	0.2				
Avg. % word-choice errors	0.9	0.8	0.0	-0.1				
Avg. % sentences with agreement errors	6.9	11.1	-4.4	-1.7				
Avg. # total punctuation errors	0.9	1.5	0.0	0.5*				
Avg. # comma errors	0.4	0.7	0.1	0.1				
Avg. # endmark errors	0.4	0.5	-0.0	0.1				
Number of respondents	202	182						

Statistically significant at the .05 level.
†Figures may not total due to rounding error.

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